Take Care!

exposure invites serious colds...

gargle Listerine when you reach home

Attending a late-season football game when the weather is bad is a gamble—no less.

Serious colds, sore throat, grippe, and even pneumonia—thousands of cases—often develop after such spectacles. Medical records everywhere confirm this.

Men and women past thirty seem to be the most frequent victims, but young people are by no means immune.

Listerine fights cold germs

Sitting in open stands in foggy, rainy, sleety, or freezing weather quickly weakens body resistance. Health authorities say lowered resistance is the major predisposing cause of colds. Disease germs already at work in mouth and throat get the upper hand.

After exposure, Nature needs help to keep disease germs under control. For this purpose Listerine, the safe antiseptic, is recommended. While it kills germs, Listerine will not harm delicate tissue.

If you attend a football game in nasty weather, do the following when you reach home:

1. Gargle with full strength Listerine every 2 hours.
2. Change clothes, shoes, and stockings if they are at all damp.
3. Place hot water bag on feet to stimulate circulation.
4. Drink a hot or warm drink (lemonade is good).
5. If you have a chill, get into bed; if a fever, call your doctor.

Reduces Mouth Germs as much as 99%

Full strength Listerine used as a gargle aids in warding off colds because it quickly destroys the germs associated with colds. In the oral cavity, millions of these germs are present.

The moment Listerine enters the mouth, this germ-killing action begins. After its use, germs are shown by actual test to be reduced as much as 99%.

At the end of 4 hours—and this is highly important—germ reductions as high as 64% are even noted.

Fewer colds for garglers

More interesting still are the careful tests in which several hundred people were studied. They were divided into two groups—those who did not gargle Listerine and those who did. Now note this:

Those who gargled Listerine twice a day contracted only one-third as many colds as those who did not gargle with it. These colds were far milder and of shorter duration than the colds contracted by non-users of Listerine. Lambert Pharmacal Company, St. Louis, Mo.

NRA

Down go LISTERINE prices!

Buy now at substantial savings

"I Saved Six Orders and Made $90 in One Day... Thanks to This Pocket Volume!"

I'VE only been selling about a year. When I broke in, though I realized that trained salesmen are the highest paid men in the world, I expected the going to be hard at first. It was—a lot harder than I'd expected, even. At the end of six months I was commencing to get discouraged. I certainly hadn't made a flop of it—but I wasn't getting the results I should have had.

Naturally, seeing other fellows who started right with me go right ahead, I realized something was wrong. A particularly disheartening thing was the fact that at times I'd be right on the point of closing a good-sized order—and all of a sudden, it would go "flop." In fact, it kept happening all the time. I was doing something, I knew, that was killing those sales.

Finally I decided that I had to do something. I had been hearing a lot about National Salesmen's Training Association. But I'd never investigated them. Then, one day, I read one of their announcements. I was amazed to find how comprehensively they covered the training of salesmen. Furthermore, they announced that they were sending a most unusual volume, "The Key to Master Salesmanship" to ambitious men who asked for it—not only experienced salesmen, but men who had never sold, but wanted a chance in this highly paid field.

Naturally, I wrote for it—it seemed to me that here was the certain solution to the errors I had been making. Imagine my surprise—and interest—when there arrived, not only one book, but two. To this day I can't decide which of those books helped me most. The little book which I had not been expecting was just what I needed at the time. It was written for men just like me—men who had been plugging along in salesmanship—never successful, never so hopeless that they quit selling. And while "The Key to Master Salesmanship" gave me an insight into the real secrets of salesmanship, the other book, "Mistakes Commonly Made in Selling" was the one I could first get practical use from.

Right in the first few pages, I saw some examples quoted. They were things I had been doing every day. I'd never dreamed they were dangerous errors. The more I thought about them, the more clear it became, though, why I was having such difficulty with my closes. I thought to myself: "By golly, that's why Barnes decided to put off buying, this very afternoon!" I kept on thinking of men whose orders I had lost, through just that very mistake. There were six of them.

The next morning I sallied out, bright and early to see if I couldn't save those sales, using the tips given me. Before noon, I had put the practical suggestions of that little book to work—and sure enough, in every case, I made the sale which I had thought was gone glimmering. Six sales saved—at $15 commission apiece, that was $90 made, by one morning's work, plus the advice of a little book that cost me nothing!

Of course, that set me to thinking. If that one piece of knowledge could make me $90, how much would I make out of having all the knowledge which the National Salesmen's Training Association could give me? It didn't take long to figure that one out, either! I was enrolled for the full training that same night; and the next two weeks saw my sales record soar. Not a minute of time lost—I studied just in spare hours but I learned things in those spare hours that I'd never have picked up, just by my own experience.

Today, I find amazing increase in the volume of my sales now over what they were a year ago. Then I was selling only about 40% of my quota—this month, with a quota twice as high as it used to be, I'm 50% over! And you know what quantity production means when the bonus checks roll around!

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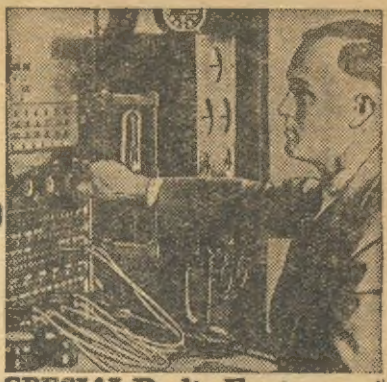

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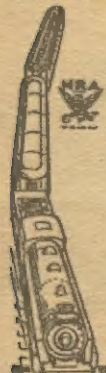

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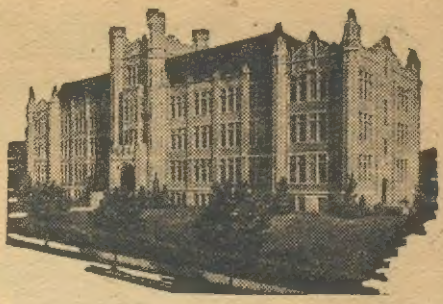

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29x4.50-20		2.35	0.85	30x3½	2.35	0.75
30x4.50-21		2.40	0.85	31x4	2.95	0.85
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28x5.25-18		2.90	1.15	33x4½	3.45	1.15
29x5.25-19		2.95	1.15	34x4½	3.45	1.15
30x5.25-20		2.95	1.15	30x5	3.65	1.35
31x5.25-21		3.25	1.15	33x5	3.75	1.45
28x5.50-18		3.35	1.15	35x5	3.95	1.65
29x5.50-19		3.35	1.15			
30x5.50-20		3.40	1.15			
31x5.50-21		3.40	1.15			
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28x5.25-18		2.90	1.15
29x5.25-19		2.95	1.15
30x5.25-20		2.95	1.15
31x5.25-21		3.25	1.15
28x5.50-18		3.35	1.15
29x5.50-19		3.35	1.15
30x6.00-18		3.40	1.15
31x6.00-19		3.40	1.15
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Civil War

Fiction Based on Facts—Complete in This Issue

By A. LESLIE

Ex-Fireman and Brakeman; Author of "Running Wild," "Railroaders All," etc.

A WIND was rising. Such a wind as had never before blown over America. A wind that was to sear the country with flames of destruction, topple outworn institutions, whirl away prejudices and false beliefs. From it was to be born a new and greater nation, a land united.

The first thunder of this terrible wind was dinning across the Charleston yards of the South Carolina Railroad in April, 1861. Two young engineers paused in their work to listen

General Sherman's Raiders Pulled Up in Confusion to Avoid Crashing into the Cars

to a distant rumble of guns at Fort Sumter.

"It's the beginnin' of hell!" Tom Raleigh predicted grimly.

"Oh, I dunno," deprecated his friend, Boone Hatfield. "I don't figure it will amount to much. There'll be a lot of sputtering up Nawth, no doubt, but once they see that Dixie means business, they'll recognize our independence."

Tom shook his head gravely. He was a native of New York and knew the sentiment up there.

"Boone, you're mistaken. President Lincoln will never stand for the Union being divided—the whole principle of it is wrong. This rebellion will be crushed, but I'm afraid it's going to take a long time to do it."

Boone smiled good-naturedly as he swung his lithe body into the cab of the "Ariel."

"All be settled friendly like in a month or two, Tom," he said. "You and me'll be workin' right here same as usual, only it'll be under the Stars and Bars of the new Confederate States of America."

Boone believed his statement to be true, but before a month had passed he was garbed in Confederate gray and bearing a long rifle over his shoulder; while his pal, Tom Raleigh, was marching with the blue-clad upholders of the Union.

ON a crisp autumn evening two Confederate officers sat talking in a tent. One was a broad-browed, white-bearded leader with calm, thoughtful eyes.

"I feel," said the chief, "that this mission requires an experienced railroad man."

"I quite agree with you, General," responded the younger officer, "and I have just the man required."

"Who is he?"

"A young captain of a South Car-

olina regiment, named Boone Hatfield."

"Hatfield—Hatfield—that name has a familiar ring. Wasn't a lieutenant of that name cited for exceptional valor at Winchester?"

"The same, sir."

"Indeed! Well, if his railroad qualifications equal his courage, he is the one we want. Send for him, Colonel Mason."

A few minutes later Boone Hatfield was surprised to receive an order to report to Colonel Mason. He knew that Mason was on the staff of the commanding general and was a person of great influence. But when he saw the colonel's companion he gasped, snapped to rigid attention, and stood at salute.

"At ease, Captain, and please be seated," said the kindly-faced man with the three stars on his collar.

Boone took a chair with diffidence. It was no light thing for a captain of cavalry to sit informally at the same table with General Robert E. Lee.

Lee went straight to the point with characteristic lack of preamble.

"Captain, Colonel Mason tells me you are an experienced railroad man. Which means, I suppose, that you are capable of driving an engine?"

"Yes, sir," replied Boone. "I am a locomotive engineer. I pulled both freight and passenger for several years on the South Carolina Railroad."

"Excellent! We are fortunate in having you here at this time."

Boone bowed, wondering what was coming next. He didn't have long to wait.

"You may know," continued Lee, "that the Federal forces have concentrated a great quantity of munitions and supplies at Harpsburg on the B. & C. Railroad. These depots are built around the railroad yards to facilitate shipment. The munitions there are of the utmost importance. We believe that the success or failure of an enemy movement planned for the near future hinges on the accessibility and prompt movement of these supplies."

The General paused and seemed to weigh his words.

"Our staff has evolved a plan," he resumed at length, "the success of which will depend upon the courage, intelligence and railroad ability of the man entrusted with the command of a certain dangerous mission. Colonel Mason thinks you are the man for this work." Boone started to reply, but Lee held up his hand. "Because of the risks involved, the service is strictly voluntary. You are at liberty to decline if you so desire."

Then Boone spoke. "I have already accepted the mission and am awaiting the necessary details."

Turning to his staff officer, the general smiled. "You choose well, Colonel Mason." His gaze shifted to Boone. "Now listen closely, Captain Hatfield ..."

THE night was pitchy black, with a promise of rain. It was silent also, save for an intermittent grumble that sounded somewhere amid the hills to the right—the grumble of cannon, miles distant, as the fortifications of two great armies bombarded each other during the hours of darkness.

To the little group of men crouched beside the railroad tracks, the sound seemed hollow and unreal, not in the least a part of the shadowy wall which hemmed them in. They strained their ears for another sound, a sound for which they had waited for hours. The tension was beginning to tell on their nerves.

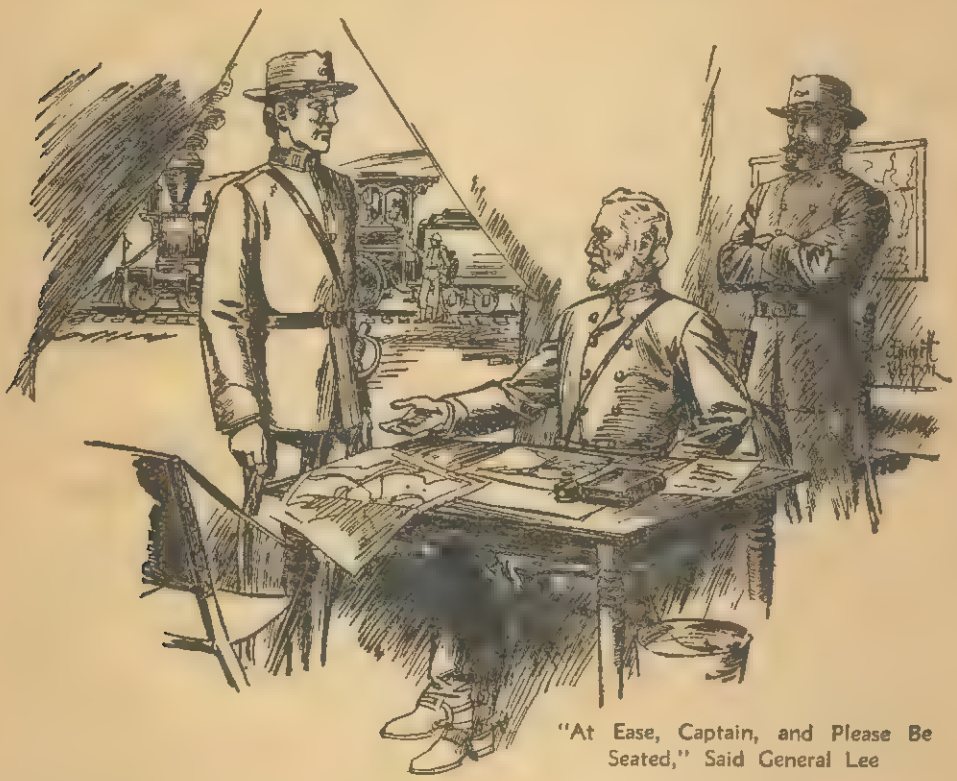
It came! Men relaxed with sighs of relief, then tensed again as the thin shriek wavered out of the distance.

"Steady," Boone Hatfield cautioned. "If the loading gang down there gets wind of us, the game's up. We've got to lie mighty low until she pulls out again."

"Think there'll be soldiers ridin' her, Captain?" questioned somebody nervously.

"No," said Boone. "There isn't a bit of reason for her having guards. We're miles inside the enemy's lines, 'way back behind his earthworks. That train's supposed to be as safe as if she was running into New York City. Under cover, everybody! She's heading around the curve!"

Far down the track could be seen the feeble beam of the old balloon-stacker's headlight. The fussy *chug-chug* of her exhaust quarreled through the darkness. The link-and-pin couplings of her train clanked and clashed. Flanges screeching a diminuendo, her speed lessened. With a final snort she pulled up at the loading station.



"At Ease, Captain, and Please Be Seated," Said General Lee

Intense activity succeeded the former somnolence there. Lights flickered, shouts resounded. Sticks of wood thumped and rattled into the little tender. Water gushed into her tank.

"They're working fast," said Boone in a low voice. "Ready, everybody, and no bungling! Remember, Carson, you and Darnley; if either of you fails to catch the caboose, the whole plan misses fire. I won't be able to slow down much for you for fear the loading gang might get suspicious, and it won't do to catch the cars ahead;

the conductor or flagman might see you crawling over the tops."

Four long wails from the engine by the loading bins called in the flag. Boone and his companions saw the conductor's go-ahead signal. Their ears caught the cough of the exhaust.

Silently two men slipped over to the left-hand side of the track and crouched in the shadows. Boone, examining his pistol, screened himself from the headlight's glare and waited. The other two members of the party slunk farther back into the darkness.

On came the straining engine, slowly gathering speed. The headlight beam flickered past where the raiders lay concealed.

As soon as her clanking drivers whirled abreast Boone's hiding place, he leaped for the cab steps.

One groping hand closed on a grab iron, his feet stumbled, scrambled, found the steps. Into the cab he swung, pistol coming out.

The astounded engineer gaped with sagging jaw. The fireman half rose from his seat, and sank back as Boone's companions hurtled into the other side of the cab, their weapons menacing him and the head brakeman. Before they were fully aware of what had happened, the engine crew were bound, gagged and laid on the back of the tender.

Boone slipped onto the engineer's seatbox. One of his companions expertly hurled slabs into the firebox. The other took the brakeman's place and peered ahead. Captain Hatfield had chosen well—his aides were railroad men as experienced as himself.

"Now if Carson and Darnley just didn't fumble," he muttered, "everything's going off like dress parade for a new colonel. One of them ought to be coming over in a few minutes."

SHORTLY afterward, the man Carson clambered across the tender and into the cab.

"Everything shipshape, Captain," he reported. "Conductor and flagman are tied up tight, and Darnley's looking after the rear end. There's oil and cotton in the caboose."

"Fine!" congratulated Boone. "Twenty minutes more, according to my study of this locality, and it will be safe to stop for an inspection of the train. Did you look at the manifest, Carson?"

"Yes, sir," replied the other. "Each car is loaded with explosive material."

Boone nodded. "That is excellent, but we must be sure. Too important to take any chances. We will stop and examine a few cars. Get rid of the train crew then, also."

A few miles farther on the engine jolted to a stop. The helpless trainmen were removed from the tender and made as comfortable as possible on heaps of brush beside the track.

"Yankee patrols will pick you up during the day," Boone assured them. "You will come to no harm."

The railroaders investigated a number of cars, satisfying themselves as to the nature of the loads. Oil was brought from caboose and engine cab. Cars were drenched with it. Oily waste was dragged from journal boxes and placed where it would do the most damage. In an astonishing short period the train was under way again.

"You know what to do, boys," was Boone's last word to the two rear men, "when we stop at the entrance to the yards. Work fast, but be sure nothing is neglected, and then save yourselves as best you can. It will be every man for himself and get back to our lines in any way possible. Good luck!"

Swiftly the train got under way.

Boone hooked her up, widened on the throttle. The exhaust deepened to a steady roar. Streams of sparks shot into the air as the fireman crammed the firebox with tinder-dry slabs. The safety valve began to screech as the steam pressure steadily mounted.

Far ahead, a dull glow beat against the eastern sky. Boone knew it for the lights of Harpsburg. His mouth set in grim lines, his steady gray eyes narrowed.

The board marking the limit of the yards loomed in the feeble headlight beam. A quarter of a mile farther on, Boone knew, woud be a military patrol. He closed the throttle and the train clanked to a halt. Fireman and brakeman moved toward the gangway.

"Good-by, Captain!"

"Good-by, boys!"

Boone watched them vanish in the darkness alongside the train. He sat alert, hand on the throttle, waiting. Steam purred and hissed in the boiler of the locomotive. He could hear the crackle of the burning slabs. The safety valve muttered.

Back along the train was a sudden leaping light. Another and another. Boone counted the flares, nodded with satisfaction. He waited a few more seconds and then cracked the throttle.

The old engine groaned, coughed hollowly in her huge balloon stack. The drivers turned over, the couplings clanged.

Fanned by the breeze of the moving train, the distant flames burned brighter. Boone widened the throttle; the speed quickly increased; smoke and sparks rolled back from the blazing cars.

In the darkness ahead sounded amazed shouts. Then came a ragged volley from the aroused patrol firing shots of warning. The soldiers scattered as the burning train crashed past. Some, vaguely beginning to comprehend the situation, brought their pieces to bear on the engine cab.

Boone heard the smack of bullets against the boiler. One seared his cheek, caromed from the firebox and droned through the opposite window. He crouched lower, widening the throttle still more.

STEAM pressure was dropping. Boone shut off the water, slipped to the deck and hurled slabs into the firebox. He leaped to the seatbox, leaned out the window and scanned the track ahead.

The burning train was rushing through the outer yards now. Frenzied notes of a bugle sounded. Boone caught the hollow boom of a field piece, heard the shriek of a shell passing over the cars. He chuckled; some excited artilleryman had lost his head.

Now the lights of Harpsburg were all about him. Boone's lips set grimly as he estimated the probable condition of the flaming cars of powder.

Should the explosion come while he was still in the engine cab, his chances of escape were slim indeed; but it would never do to stop the train until it was well within the confines of the inner yard, surrounded by the depots of munitions and supplies.

He pulled the throttle back to the last notch and crouched low beside the window.

Bullets from the rifles of a thoroughly aroused garrison were battering the cab. The heavy slugs tore through the wooden sides, smashed gages and connections. Steam billowed into the cab.

Boone flinched as scalding spray seared his face and hands. Leaning far out the window, he caught the loom of huge wooden buildings. He closed

the throttle and the train rolled forward with lessening speed.

The young engineer crouched tense, every nerve quivering. He dared not leave the cab until the engine halted; he must be *ahead* of the explosion, not *beside* it.

Would the train never stop! Without brakes set, the cars continued to roll forward.

Boone Hatfield threw the reverse lever back, opened the throttle. Couplings clashed and clanged as the snorting engine slid on spinning drivers.

Boone closed the throttle as the wheels held and the locomotive surged back. He dropped to the ground, dashed forward.

A hundred yards, two hundred, he ran. Bullets snapped about him. Shouts and yells rang in his ears.

He whipped around the end of a string of cars, plunged headlong over a wire fence. Scrambling to his feet, he dashed into an alley between two rows of buildings.

Suddenly he was hurled to the ground as if by a giant hand; his ears rang to the crash of an explosion. He staggered erect again and reeled on, clearly revealed in a lurid light that was swiftly brightening.

A figure in blue loomed before him. Boone reached for his pistol. The weapon was dashed from his hand and he was caught in a mighty grip.

Breast to breast the antagonists struggled. Boone strove with all his sinewy strength to down the other, but the Yankee was as strong as he.

Freeing his right hand, he struck at the bearded jaw. The other moved his head slightly, Boone's fist whizzed harmlessly over his shoulder and the two men saw each other face to face.

Abruptly their efforts ceased. They stared with dilated eyes.

Boone was the first to recover. "Tom! Tom Raleigh!" he gasped.

Tom's lips opened to speak, but the words were wiped away by the thunder of an explosion a hundred times greater than that of the train of powder.

The flame wrapped munition depots of Harpsburg hurled their volcano blast to the paling stars, and Boone Hatfield, falling into a bottomless pit of darkness, knew his mission had not failed.

Into the Water Dungeon!

WHITE sheets. Boone plucked at the upper one wonderingly; it was a long time since he had slept under such a thing. Where was he, anyhow? How did he get here?

Remembrance flooded over him. Tom Raleigh. The explosion. Must have been knocked out. Sure, that was it—a hospital. He strove to sit up and was astonished at his own weakness. Then a feminine voice.

"Lie still, Captain."

The tones were wonderfully soft and sweet, Boone thought. He turned his head slightly in the direction of the sound.

Wide eyes of a blue so deep as to be almost purple. Soft brown hair with just the suspicion of a curl to it. A round white chin.

Boone thought the nurse's uniform vastly becoming to this slim girl who stood beside his bed. He grinned weakly, and her red lips wreathed in an answering smile.

"Your medicine is ready," the girl said in the same gentle inflection.

She raised his head with deft, slender hands, and Boone obediently swallowed the draft she held to his lips. Then he sank back, the shadows gathering about him again.

"What is your name?" he managed to whisper.

The nurse smiled again, ever so slightly. "Edith," she replied, "Edith Stoneman."

Boone was much stronger when he awakened next. He sat up, glanced about.

Yes, he was in a hospital, all right. Through an open door he could see other beds, occupied. The blue-eyed nurse was nowhere in sight, but a soldier, rifle in hand, sat just inside the door. Boone nodded to himself, understanding perfectly.

"Prisoner," he mused, "picked up unconscious. Wonder if Tom was killed in the blowup? Sho' hope not. Certainly did give me a start, seeing him that way. Good God! What if I'd shot him! Damn wars, anyhow!"

An orderly entered, bearing a tray of food. He placed it on a table beside the bed, procured a pan of water and proceeded to sponge the patient's face and hands.

Boone asked him a question, but the attendant only shook his head. Evidently his orders were not to talk with the prisoner. The food was excellent, far better than the Confederate had eaten for many a day, and Boone did ample justice to it.

"If we had eats like this regular, we'd have whipped the Yanks long ago," he chuckled. "Good thing for them the boys don't know just what's up Nawth; there'd be no stopping 'em."

Boone saw nothing of the nurse that day. The guard was changed at regular intervals. A different attendant ministered to his wants late in the afternoon. He went to sleep that night wondering if Miss Stoneman would appear again.

She did, shortly after Boone awoke the following morning. Having his hands and face washed for him had been somewhat of an ordeal the day before, but this time it was a positive pleasure.

The engineer stated as much, and was rewarded with a musical laugh that showed adorable dimples. Miss Stoneman refused to talk, however, and departed soon after serving breakfast. Later an orderly entered with the Confederate's clothes.

Boone dressed, rather shakily, wondering what was up now. He seated himself on the bed and waited.

THERE was a clank of equipment in the outer room. A tall man wearing the uniform of a major of United States infantry entered. Beside him was the nurse. A file of soldiers followed, lined up and stood at attention. Boone rose to his feet, a welcoming grin on his lips.

But Major Thomas Raleigh looked straight through his former fellow-railroader and his eyes were cold, his face stony. Boone flushed hotly and quickly dropped the hand he had half extended.

"Sergeant," said Tom to one of the troopers, "this man is to be confined in Lowry Prison. Attend to it."

The sergeant saluted. "Yes, sir. The upper tier, sir?"

Tom's voice was crisp, decisive. "No! The water dungeon—and double guards!"

From the little nurse's lips came an exclamation of protest. "Major, this man is still weak from his injuries. To confine him in such a place may have serious results."

"The water dungeon is the place for him," declared the major sternly. "He is a dangerous enemy and has done incalculable damage."

"But, Major—"

"Miss Stoneman, I am in command here. My orders are that he be confined thus."

The nurse faced the officer. Her face was so white that her blazing eyes seemed great black pools. Boone wondered at her temerity. He caught fragments of her low voiced sentences.

"Inhuman—I demand—desirable—have access—certain information."

Her right hand moved swiftly, seemed to cup something before the major's eyes. He paled slightly but shook his head.

"No, not even for that," Boone heard him say. "Only direct orders from the officer commanding the district will change my decision."

"Sergeant," his voice rose curtly, "remove the prisoner!"

The file clanked out, Boone Hatfield in its midst. He caught the girl's glance for an instant. Her big eyes seemed to be swimming with tears. Or maybe the prisoner only imagined it. He smiled at her and shook his head.

Water dungeon! The words had a sinister sound, but Boone was totally unprepared for the horror of the place. There really was water there, a noisome scum of it sloshing over the uneven stone floor. There were rats, too. Huge brown fellows with eyes that glittered fiercely in the dark. And other things—creeping things that Boone could not recognize but that caused his flesh to crawl when they touched it. The air was foul and stagnant, the darkness intense.

The steps of the guard in the corridor outside the solid iron door sounded like clods falling on a coffin lid. No wonder Nurse Stoneman had been horror-stricken at the thought of confining here a man just risen from a hospital bed.

"What in hell come over Tom Raleigh, anyhow?" Boone wondered. "I wouldn't put a snake in this hole. It's the war, I guess," he added bitterly.

As the slow hours of darkness passed, his wonder grew, and with it a consuming anger. He had taken his chances, ready to meet whatever Fate should see fit to hand him on his dangerous mission, even death itself, but he had not counted on anything so terrible as this—and at the hand of the man who had once been his best friend!

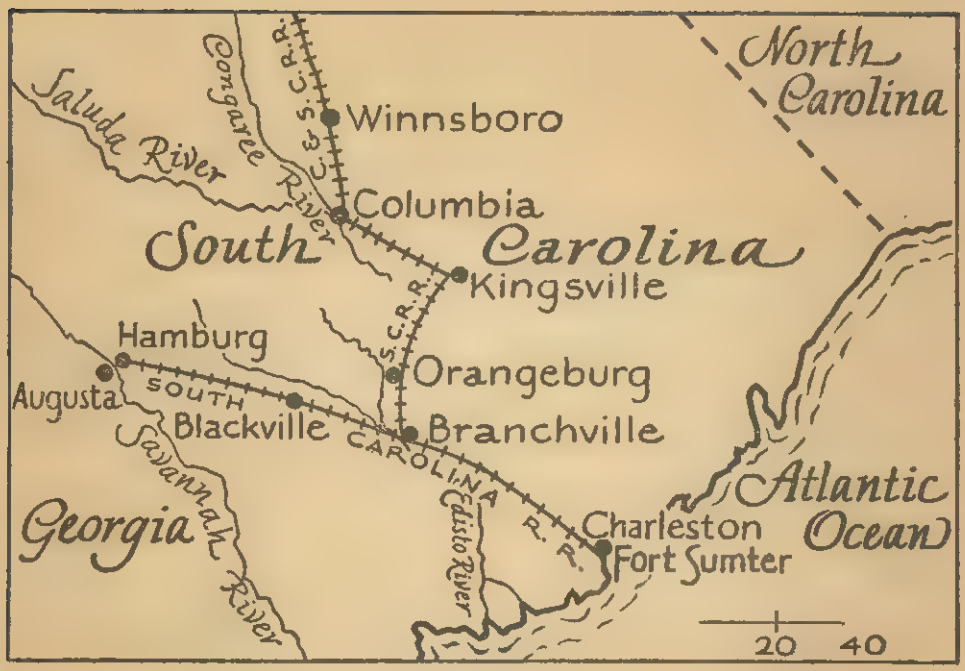
"Reckon he's plumb forgotten the time I crawled under that burning wreck and cut him loose just before the whole damn business come tumblin' down," Boone muttered wrathfully. "I'm sho glad there ain't many Yanks like him."

THE door shrieked on rusty hinges, swung slowly open. By the feeble beams of a lantern, Boone saw a soldier shove a pan of black bread and a jar of water through the crack. The door closed again without a word being spoken.

Boone ate grimly of the hard bread and drank the water. He needed strength; and food, no matter how unpalatable, was necessary. Settling himself on the damp stone slab that served for a bed, he tried to sleep. Finally he dozed fitfully.

The rats grew bolder. One ran across his chest, another nipped at a downflung hand. Boone sat up, swearing to himself.

"Sounds like one of the damn things is gnawing a hole in the wall over there," he growled, his attention attracted by a slight scratching sound.



Map of the South Carolina Railroad at the Time of the Civil War (1861-1865)

The scratching grew louder, changed to a creak. Boone blinked as a white line appeared on the black wall. The line widened until he could see it was a beam of light.

With a low grinding sound, a slab of stone turned on a pivot, and a tall figure stood etched in the light of a lantern.

"Boone!"

The prisoner started in amazement at the voice of Tom Raleigh.

"Don't talk, just listen," the voice cautioned.

Boone disregarded the advice. "What the hell did you mean by putting me in such a place?" he demanded. "And what's the meaning—"

"Hush!" warned Raleigh. "Not so loud. I put you in here 'cause it's the only place I could get you out of. Listen to me—you got any idea what's due to happen to you t'morrow?"

"What?" the Confederate gasped.

"You're to be shot, that's what!"

"Shot? But—what—why—"

"Colonel Harkness, commanding this district, is meaner than the devil wants him to be. He's furious at the damage you did the other night and has ordered your execution immediately, before anybody has time to interfere. He knows very well Grant would never stand for such a thing, but before word could be gotten to Grant and orders come back countermanding Harkness' action, you'd be pushing up the daisies. Harkness could justify himself, once the thing is done. You are inside our lines, and not in uniform. Harkness is executing you as a spy. Kinda rank, but enough excuse for him. You're the only one of your gang of hell-raisers we managed to catch."

"Aren't you taking awful chances to come here, Tom?" questioned the other man.

"Not so much. I learned the secret of this dungeon from an old fellow

who is dead now. I don't imagine anybody else in the world knows it. It will look like you discovered the way out by accident."

"That's mighty fine of you, Tom!" Boone said gratefully.

"Not at all," was the reply. "I couldn't see a man who once saved my life shot just because he did a damn brave thing. If you were just being held prisoner, I wouldn't raise my hand to help an enemy to escape, but this is different. Besides," he added with seeming irrelevance, "I got a kind of soft spot for secret operatives and such. They're brave men and women, Boone, braver than us soldiers."

Boone nodded agreement. "What's the next move, Tom?"

"Follow me down this passage," the Yankee directed. "All right, straight ahead. There's two ways out, but the one you're to take leads into the river. You'll have to swim under water a ways. Think you can make it?"

"Sho' I can," Boone assured him.

"All right, straight ahead, then. I turn off here. Follow the river until you come to the railroad. Travel nights and lay low days. You oughta make your lines all right. Here's some money to buy food, if you can find any. No, don't thank me, Boone, you'd do the same thing for me, and you know it. See you when we march into Richmond!"

"You mean when *we* march into Washington," corrected the Southerner with a grin.

Silently the two men clasped hands, and slipped away.

BOONE crept along until the water lapping about his waist was breast high. Taking a deep breath he dived forward and swam strongly. Twice his head touched the stone roof of the passage, but at the third attempt he broke the starlit surface of the river and gazed stealthily about.

"Guess everything is quiet," Boone decided. "Well, here goes nothin'!"

Panting and exhausted, he reached the farther bank. He rested a while and then struck out down the river. Daylight found him holed up snugly in a clump of willows. He was ravenously hungry when night arrived, but there was nothing to eat. Pulling his belt a notch tighter, the fugitive set out for the railroad.

Two days later, Colonel Mason of General Lee's staff sat in his tent and listened to the story of the gaunt, hunger-ridden man who talked between mouthfuls. At the completion of the tale, the colonel did something he was rarely known to do; he shook hands with the narrator.

"I thank you, and the commanding general thanks you, Major."

He smiled broadly as Boone Hatfield looked up in surprise. "Yes, I said *Major*. You didn't know it, but there was a major's commission awaiting you at Harpsburg, if you should have the good fortune to get back here to claim it."

Boone voiced his appreciation.

"Now, Major," continued the staff officer briskly, "we have further railroading for you. It has been decided to send you back to South Carolina. You are to take charge of the line on which you formerly worked—the South Carolina Railroad. A practical man is needed there just now, and I'm afraid he will be needed much more in the near future."

"But, Colonel," protested Boone, "to leave the front lines! To retire to a quiet section where there is no action. I—"

Colonel Mason smiled a trifle sadly.

"You will not want for action, Major. The Yankee general, Sherman, is marching across Georgia, sweeping all before him and, we learn from reliable sources, contemplates a raid through the Carolinas. Columbia, the capital of South Carolina, will be one of his objectives, naturally, and the South Carolina Railroad lies in his path. You will find plenty of problems and plenty of excitement at your new post, Major."

BOONE quickly realized that Mason was right. South Carolina seethed with rumors, apprehension. His old commander, Wheeler, was there, massing his cavalry to check Sherman's advance, perfecting plans for the defense of the capital. Boone thrilled to the feel of a throttle again, to the familiar names.

Orangeburg, Midway, Blackville, Aiken, Hamburg! These words had held significance for railroaders since the pike was first built, more than thirty years before; at which time it extended 136 miles and was the longest railroad in the world!

Running originally from Charleston to Hamburg, it had put Charleston back on the map as one of the most important ports in the country. At one point an inclined plane had been used, the cars being hauled up it by a stationary engine. Later, the track at this point was shifted and the plane done away with.

The 136 miles of road had cost a million dollars, and when the entire line was first opened, in 1833, the railroad world marveled. The terrific speed of twenty miles an hour was made by the engine, with train. The whole trip from Charleston, S. C., to Augusta, Georgia, across the river from Hamburg, was made in twelve hours. Trains did not run during the hours of darkness.

The road had always had a colorful history, but former happenings were as nothing compared to the stirring scenes it was soon to witness.

Boone inspected engines he had formerly handled. The old "Ariel," the giant new "L. J. Patterson," with her 14 by 24-inch cylinders. He recalled that the "West Point," the first horizontal-boiler locomotive built for the road, was equipped with cylinders whose bore was six inches, with a sixteen-inch stroke. Her drivers had wooden spokes and were four and a half feet in diameter. She weighed four and a half tons. Lots of progress had been made since those days!

A Railroad on Stilts

A COUNCIL was being held at military headquarters. Boone Hatfield, in his capacity of railroad supervisor, was present. He listened intently to the discussion raging about the commanding general's table.

"If only we had artillery on the farther bank of that swamp," said a colonel of infantry, "we could check the advancing column and save a vast amount of valuable stores."

"Yes," agreed the commander, "but unfortunately we have no cannon there, and no way of getting them there. It is utterly impossible for horses or men to move across the swamp," he went on, "and just as impossible to operate pontoons there. The consistency of the swamp surface is such that, while it will bear no weight of any moment, it will not permit the use of boats."

Another officer chimed in: "Its length and the nature of the country at either end preclude circling it in the time allowed us. It is not wide, though, comparatively speaking."

The general commanding spoke with finality. "Gentlemen, we feel that the only way to halt the advance of the enemy column is by means of artillery on the far bank of the swamp. We are also agreed that it is impossible to get artillery across the swamp. Therefore, it would appear, the enemy is not to be halted."

"I can get cannon across the swamp in time, General," said Boone.

All eyes were turned to the speaker. General Wheeler spoke sharply.

"How will you accomplish this seeming miracle, Major Hatfield? By what means will you transport artillery across the swamp?"

"By railroad, sir."

The general stared. There was a murmur of astonishment from the grouped officers. A tall colonel with a bristling mustache exploded harshly.

"This is no time for jesting, sir!"

Boone Hatfield's eyes flashed, but his voice was quiet as he replied.

"If it please the colonel, jesting is far from my thoughts at present. With the general's permission, I will outline my plan."

"Proceed, sir," said Wheeler.

Boone talked. The staff listened. Curiosity turned to mild interest, interest to enthusiasm. The colonel who had criticized Boone pressed forward.

"Accept my apology, Major," he begged. "I'm usually speaking out of turn, and I'll wager that right now I'm taking the words from the general's mouth when I say that your idea is the solution of our problem."

General Wheeler smiled. "You're right, Colonel."

THE desolate and hitherto impassable swamp became the scene of intense activity. A spur was quickly thrown out from the railroad nearby. Pile drivers commenced to hammer huge piles into the soft mud.

Across the swamp crept the parallel lines of piles, their tops leveled off with meticulous care, the distance between the two lines accurately spaced. Labor was plentiful and the work proceeded with great speed.

Next, heavy timbers were clamped and bolted upon the pile tops. Then rails were laid upon the timbers. General Wheeler, watching operations from the shore of the swamp, shook his head and whistled.

"A railroad on stilts! Gentlemen, I've been through a good many hard-fought battles, but I'm not sure I have the courage to ride on that thing!"

Boone Hatfield had the courage. He entered the cab of a light engine, to which was attached the long string of flats mounted with the precious artillery.

Out upon the quivering, swaying "stilts" crept the train. Boone glanced across at the lean hillman who sat on the fireman's seatbox, and grinned.

"How's she feel to you?"

The other's slow drawl sounded above the pound of the laboring exhaust.

"'Bout like the bad dreams I used to have when I fust got a job firin' on the ol' Georgia State."

The "bad dream" stood the gaff. The questing pilot crept on. It seemed to feel its way across the rickety structure. The exhaust sounded like a sigh of relief as the drivers clashed against the solidly grounded rails of the siding which had been hastily constructed on the far bank.

A few minutes later the unloaded

cannon were rumbling at a gallop across the flats, to be mounted into place and halt the Federal column which marched to seize the coveted stores.

It was a fine victory for Confederate railroad genius, but only a temporary delay for the Union forces. Resistless as fate, the Grand Army of the West swept on!

Boone was at Columbia when the ominous news arrived: Sherman was on the banks of the Edisto River. He would strike the railroad near Branchville, it was said. There were valuable supplies in Branchville that should be moved to Columbia. Cars and an engine were needed. Boone decided to handle the throttle himself on the dangerous run.

He chose the powerful "L. J. Patterson," got his train together and pulled out of Columbia on a gray February day.

Sixty-eight miles to Branchville! Boone widened on the throttle, hooked the bar up toward center. The gallant old wood-burner responded nobly, jerking her long train along at furious speed.

Clouds of smoke and showers of sparks poured from her wide stack. Her exhaust was a rumbling roar. The clank of her spinning drivers echoed loudly across the dismal swamps.

Countrymen pulled their frightened teams to a halt and stared in amazement. Boone chuckled, recalling that story told about the old "West Point's" first run, when a frightened teamster whose horses had run away replied to the question why he didn't hold on to his team:

"Hold on? How the devil could I hold on, when I saw hell in harness comin' down on me?"

The smile left Boone's face and his eyes grew somber. "There's hell unharnessed over there, all right," he told himself, gazing toward where beyond the skyline, the rifle barrels of Sherman's troops were glinting in the sunlight.

THERE was intense excitement and much confusion in Branchville. The Confederate engineer got his train together by superhuman effort and headed back to Columbia. He could hear, across the Edisto River, the thunder of Sherman's cannon.

Branchville was full of wounded soldiers and stragglers. Companies of gray-clad cavalry were maneuvering. Staff officers were riding madly through the streets. Boone was glad when the turmoil was left behind and he could let the big engine out. He grimly determined to better the down run.

After taking wood and water at Orangeburg, he pulled slowly out of the town. The fireman, a lanky hillbilly, wiped his streaming face and climbed onto the seatbox, scanning the flats with keen mountain-trained eyes.

"Major," he exclaimed suddenly, "are we-uns s'posed to have any cav'lry patrols out 'round heah?"

"Not that I know about, why?"

"Theah's cav'lry on that road what cuts across the swamp."

Boone left his seat, crossed to the fireman's side of the cab.

"Looks like purty nigh a company," commented the head brakeman, shielding his eyes with his hand.

Boone gazed long and earnestly, and his mouth tightened.

"Price," he told the fireman, "it is cavalry, a full company, and it's Yankee cavalry!"

"So I cal'lated," replied the fireman

calmly, "but I wanted the Major t' see for hisself."

The railroad swept around the swamp in a great curve. The highway cut squarely across it, forming a crooked chord of the arc. Boone estimated the distance, the probable speed of the troop.

"It's going to be close," he said, almost to himself, "but I believe we can do it."

"Give them slabs hell!" he ordered the fireman as he slipped back onto the seatbox. "We're going to need every ounce of steam we can get!"

"You figger they aims t' tackle us, Major?"

"That's just what they intend doing, Price. They realize this must be a valuable train and they aim to seize it. If they reach the crossing before we do, we're goners. They'll blow this cab clean off the boiler and us with it. Our only chance is to get there before they do."

"Mought pull up 'fore we get theah, Major. Guess they wouldn't do no shootin' if we was standin' still."

"And lose the train and be taken prisoner? Not much, we won't!"

The fireman chuckled as he stepped to the deck. "Hardly figgered you would—jest wanted to know how you felt about it. Let her out, Major, and we'll show them Yanks some railroadin'!"

BOONE "let her out." The long train rocketed over the poorly ballasted track at a terrific rate. The engine thundered defiance to the distant cavalry.

Boone crossed the cab from time to time to gaze at the riders galloping to intercept him. He shook his head as he realized how short the distance they had to travel, how wide was the curve which must be followed by the speeding train. He glanced anxiously at the steam gage.

Price was doing a fancy job of firing. He had the needle "right against the peg." The safety valve lifted, and Boone frowned at the loss of precious water.

"Can't stand much of that," he muttered.

The throttle was wide open, the bar hooked up as high as possible. Boone glanced out at the earth rushing past him, his gaze flickered to the purring safety valve and his lips set in a grim line.

"Price," he ordered, "you come over and keep an eye on things a minute. Burton," to the brakeman, "you look after the fire."

Wrench in hand he stepped out onto the running board, and screwed the safety valve down tight. The fireman's face whitened slightly under its grime as the gage hand crept past the limit-of-pressure mark, but he grinned as Boone resumed his seat.

"Major," he drawled, "you-all got any hard money saved up?"

"A little," Boone replied, "why?"

Price's drawl was more pronounced than ever. "I got ten dollars, Major, and I'll bet the whole ten I go higher than you!"

It was grim humor, but if the overtaxed boiler should happen to let go, the matter of relative height had interesting possibilities, Boone was forced to admit.

"Them cav'lrymen is gettin' damn close," shouted the brakeman.

Boone crossed the cab, gazed over the swamp. He could see the ominous flicker of steel along the van of Sherman's hard-riding raiders. Puffs of smoke spouted from amid the dark ranks, but the range was great and a

galloping horse is not a favorable stance for firing at a moving object; the bullets flew wide.

Around the sharpening angle of the curve lurched the engine. Her boiler was rumbling a protest, steam was spurting from under her jacket where rivets and stay bolts loosened under the strain. Price glanced casually at the still crawling gage hand, then deliberately stepped to the deck and put in a fire.

Down upon the crossing swept the "L. J. Patterson," screeching, roaring, her drivers clanging against the iron. Her stack was a volcano of fire and smoke and sparks. She was spouting steam from cab to smokebox. Boone tugged at the already wide-open throttle, prayed for even a trifle more of speed.

The air was filled with the thunder of galloping hoofs, the cries of wildly excited men, the crackle of pistols. The engine crew crouched low as a storm of lead pattered against the cab. Price leaped to the gangway and yelled like an Indian.

For the flying locomotive had swept past the crossing! Sherman's daring raiders were pulling up in confusion to avoid crashing into the swaying cars. The caboose bounced by, conductor and flagman on the platform.

Boone saw the boys in blue swinging their caps, faintly heard their rousing cheers. The gallant cavalrymen, good losers that they were, scorned to fire on the unarmed trainmen and were rendering the homage due to daring and success.

THE Confederate major found Columbia in a state of great apprehension. He disposed of his train, reported to the commanding officer and received other assignments that kept him too busy for conjecture as the turbulent days passed.

On and on came the legions of General Sherman, leaving death and ruin in their wake. The railroad was utterly destroyed from the Edisto River to Blackville and from Orangeburg toward Columbia. Union soldiers tore up the light rails, made great heaps of the ties and set them afire. They placed the "bars," as the rails were called, across the blazing ties so that the middle of the rail rested in the blaze. Then a dozen or more men would seize the heated rail by either end, and carry it to the nearest tree and wind the softened iron about the the trunk. The forests along the right-of-way were full of these grim "corkscrews" of war.

February 16th, and Sherman was on the south bank of the Congaree, with Columbia in plain view. Boone, among the last of the Confederates to evacuate the doomed city, was at the railroad station. He stepped into a waiting room and suddenly stiffened with amazement.

A girl was hurrying across the room, evidently bound for the street entrance. In three long strides, Boone Hatfield was by her side. She turned as he approached. Her face whitened and she gave a little cry. Boone gazed into the wide blue eyes with unconcealed delight.

"Miss Stoneman! Where in the world did *you* come from?"

The little nurse of the Harpsburg hospital was in a woeful state of confusion, but Boone, in his joy at seeing her again, took scant notice.

"This is just about the best luck I've had in a long time," he declared.

Then the unusualness of the situation dawned on him. With the realization came a disquieting thought.

"But what are you doing 'way down here in Carolina?" he asked. "How did you, a nurse in a Yankee hospital, get inside our lines?"

"I—I have relatives here," the girl replied. "There is serious illness in the family and I managed to get a *safe conduct* to Columbia. See, here is my pass."

She handed Boone the document. He saw it was signed by a staff officer and countersigned by General Beauregard. It was, to all appearances, a *bona fide* "safe conduct" from the Federal lines north of Richmond to Columbia and return, providing also for an escort through the Confederate lines.

Boone knew that the incident was not without precedent. Very often during that war, in which brother fought against brother and families were split asunder, influential Southerners had visited friends or relatives in the North and like privileges had been accorded the Unionists.

BOONE'S brief apprehension was lost in a sudden remembrance of his own duties.

"Why couldn't I have found you sooner?" he mourned.

"Why do you ask that?" inquired the girl.

"Because I'm leaving Columbia in twenty minutes. Sherman is across the river and we are evacuating the town." His brow creased with worry. "I hate to leave you here in the path of an invading army."

The girl glanced nervously about, but her air was one of relief. "I hate to see you go, too, but remember, I have friends among the Northerners also, Captain."

"Major," Boone corrected her boyishly. "Didn't you notice I've gone up in the world?"

"I'm glad," she said simply, "and I'll never be able to tell you how pleased I was to learn that you had escaped from that terrible prison. I have never understood why Major Raleigh insisted you should be confined there."

"Oh, Tom was acting for the best," Boone told her. "He had very definite orders, you know. You mustn't hold that against him."

"It's nice you feel that way," the nurse replied, "but I must go now—Major."

"When am I going to see you again?" Boone urged. "And where?"

The girl was thoughtful. "I don't know. Perhaps—perhaps Major Raleigh can tell you where I am, if you ever see him again."

"I'll make it my business to, soon as we've got the Yankees whipped," Boone assured her.

The girl smiled wistfully. "Good-by, Major," she said, holding out her hand. "Maybe we *will* meet again—some day."

Another Dangerous Mission

GENERAL WHEELER, the Confederate cavalry commander, was in his field quarters, surrounded by members of his staff. He sent for Boone Hatfield, and immediately came to the point.

"Major," he began, as Hatfield entered and saluted, "there is in the outer railroad yards of Columbia a train of several cars with engine attached. The head car of this train is loaded with valuable records from the Capitol building. The rest of the cars contain military supplies. It is my earnest de-

sire that this material, particularly the records, be transported over the Charlotte & South Carolina Railroad north to Charlotte, N. C., if such a procedure is possible. Do I make myself clear?"

"Perfectly, General," Boone replied.

"Federal troops are already crossing the Saluda River and preparing to attack Columbia from the north. If prompt action is taken, I believe there is a chance to get through with the train. I desire that you personally undertake this mission."

"Any further instructions, sir?" Boone asked.

"Only that, under no circumstances, are the records and military supplies to fall into the hands of Sherman's troops. If you see that it is impossible to reach Charlotte with the train, destroy it in some manner. I rely on you, Major. Here are orders empowering you to requisition any assistance you may require."

Boone hurriedly left the commander's tent, mounted his horse and galloped to the C. & S. C. yards. He paused only once, at the detachment to which he knew Price, his fireman on the thrilling run from Branchville, had been assigned. His orders from Wheeler procured the hillman without delay. Together the two entered the yards.

The train was ready, the engine attached, steam up.

"Do you wish a caboose and train crew, Major?" queried the yardmaster.

"No," said Boone, "only a head man."

The engineer noted with pleasure as they pulled out of the yards that the engine was of the same type as the S. C. R.'s old "Ariel," with 11½ by 24-inch cylinders. He thrilled to the power surging beneath the throttle, feeling the elation that always comes to a man seated on the right side of a cab.

"Plenty of excitement in war, but it can't touch railroading," he shouted to Price.

"By the looks o' things 'crost the way, theah's some extra special 'citement gettin' ready t' bust 'round us 'fore long," the fireman replied, jerking his thumb out the cab window.

As Boone gazed in the direction Price indicated, his face grew grave. The enemy had already crossed the river in great numbers and was proceeding in the direction of Winnsboro, S. C. The moving infantry was, as yet, nothing but a cluster of tiny black dots, but there was the possibility that the foot soldiers had been preceded by cavalry. Boone widened on the throttle, an anxious look in his gray eyes.

"If they reach Winnsboro before we do, we'll never get through," he told Price. "They'll tear up the tracks or barricade them. I believe we can make it, though, if there isn't any cavalry out."

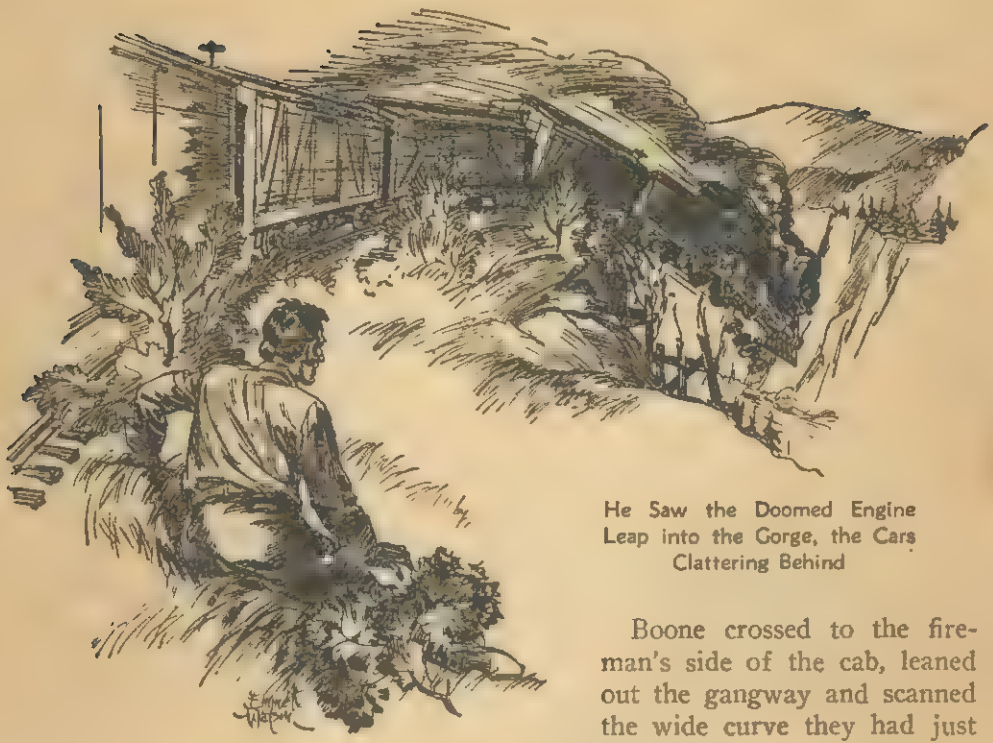
"Cavalry on this side the Congaree now," reported the keen-eyed fireman.

"No danger so long as they're not 'way ahead of us," Boone assured him.

THE train arrived at Winnsboro without mishap. The pursuing horsemen were still only a swiftly approaching dust column. Confident in the knowledge that no horse could hope to overtake the train, Boone took time to secure plenty of wood and water. He pulled away from the town just as Sherman's advance was thundering into it.

"Bet there's some tall cussin' going on back there," he chuckled to Price.

The fireman was leaning out the window, his gaze running over the silent yards.



He Saw the Doomed Engine Leap into the Gorge, the Cars Clattering Behind

"Plumb funny thing our boys didn't bust up them engines 'fore they skun out," he commented. "Theah's one over theah with steam up, a big new one, too."

"Too much hurry, overlooked them," Boone decided. "They'll be plenty busted when Bill Sherman gets through with them," he added with a sigh, thinking of the destruction on the South Carolina Railroad.

Boone did not let the engine out after they left Winnsboro. There were as yet no Federal troops to the north of the town and speed was not so urgent. They rolled along through the mellow sunshine of late afternoon at a good clip, but conserving wood and water. Price, whose restless eyes were everywhere at once, suddenly called to the engineer.

"Come over heah, Major, and take a look at that smoke back behind."

Boone crossed to the fireman's side of the cab, leaned out the gangway and scanned the wide curve they had just covered.

Beyond the curve, where the track entered a dense woodland, a thread of smoke was drifting over the treetops. It was not the kind of streamer that would rise from a campfire or a chimney. It was a long thin line, as if the object from which it proceeded were moving.

Boone frowned in perplexity. Suddenly he gave vent to a startled exclamation. "Looks like smoke from an engine's stack!"

"Jest what I was thinkin', Major, but they ain't no 'gine got any business bein' back theah."

"I know there isn't," agreed the engineer, still studying the black line.

Boone leaped across the cab, jerked the reverse bar up higher, widened the throttle.

"Price," he barked, "get after your fire. Brakeman, pull those slabs down where he can reach them easy. I know

what that smoke is, now. *We're being chased!* The Yanks have grabbed off one of those engines in Winnsboro yards and they're coming after us hell-bent-for-election!"

The little old wood-burner responded nobly, but anxious glances over his shoulder told Boone that the column of smoke was steadily drawing nearer.

"I'll bet a slab of hardtack it's the big Baldwin type we saw in the yards with steam up," he worried. "That loco can make three feet to our two."

Price wiped his streaming face and glanced at the steam gage. "Got every pound on her she'll stand, Major," he said. "Gonna try that valve screwin'-down stunt?"

"Not with this old teakettle," Boone replied decidedly. "She's lucky to hold together with what the gage allows. How does that smoke look to you now?"

"Damn sight closer than when we fust saw it. Wouldn't be surprised if we get a look at 'em the next straight stretch."

PRICE'S prophecy came true. The train swung around a long curve and straightened out. For more than a mile the track ran without a single bend or anything to obstruct the view. Before the next curve was reached, Boone saw the shining black front and the belching stack of the pursuing locomotive.

"It's that big one, all right," he growled, "and they've got three or four cars—loaded with soldiers, too, I bet!"

Price swore whole-heartedly. "You kin jest see 'em crawl up on us," he declared. "What we gonna do, Major?"

Boone thought furiously, reached a decision. He called the brakeman to his side, gave him precise instructions. The head man nodded, scrambled up the wood in the tender and reached the top of the first car. He crawled carefully along the swaying running-board, crossed the dangerous opening between the cars and proceeded to the rear of the train. He vanished between the last two cars.

Boone waited, his eyes on the track ahead. Around a sharp curve swept the engine. Down another short straight stretch she boomed and struck another curve. Boone tooted one short whistle blast.

With consummate skill, he jockeyed the train, giving the brakeman a chance to pull the pin and release the links. A shout sounded faintly from the rear; Boone glimpsed a hand waving frantically from between the cars. He widened on the throttle, saw a quickly growing space between the last cars.

A head bobbed into view. The brakeman scuttled across the car tops, slid into the cab.

"Good work, Farley," Boone commended him. "That may give them something to think about."

The brakeman shook his head. "She's rolled too damn far down the straight line," he answered. "If she'd jest stopped on the curve, they'd slammed smack into her and the chances are it would have derailed 'em. Looks like I bungled the job."

"You did everything that could be expected of you," Boone insisted. "Besides, it'll delay them quite a bit."

Half a mile farther on a short siding was passed. The fireman was disgusted.

"Dadblame it!" he raved. "That switch would hafta be right heah. They'll shove the car in theah and hardly lose any time 'tall!"

The truth of the statement was all

too evident. Boone pondered the situation, called Price across the cab.

"You handle the throttle for a bit," he instructed. "Farley, you fire."

He procured a short-handled ax used for splitting slabs, reached the top of the train and crawled to the last car. Here he stood erect, balancing on the precarious foothold, and chopped furiously at the car top.

After minutes of prodigious effort he had a hole big enough to crawl through. He entered the car, struck a match and peered about. The car was partially filled with cotton, barrels of oil and other stores.

Boone nodded with satisfaction, struck matches and applied them to the inflammable material. He groped through choking smoke to reach the exit. Then he pulled himself through and made for the engine. A glance back showed the pursuing engine booming around a curve less than a mile distant.

Boone relieved Price and sent the brakeman over the cars again. After waiting until flame and smoke were spouting from the last car roof, he gave the signal. The brakeman cut the burning car loose on a curve. Boone eyed it with satisfaction as the hell on wheels disappeared from sight.

"That ought to hold them up a bit," he called to Farley.

"Yeah," agreed the fireman, "but I see a water tank and loadin' sheds ahead. Theah'll be another sidin' theah and they'll get rid of it."

BEFORE the loading sheds were reached, the pursuing engine again hove into view, shoving the burning car ahead of it.

Despite the delays and difficulties, the big locomotive had crept up on Boone's old teakettle. He estimated the space that separated the two trains as less than half of what it had been when he first sighted the pursuer.

In fact, the distance was so short, the Federals decided to chance a little marksmanship. Puffs of smoke drifted from their cars as a curve brought the fugitives into line. Bullets screamed angrily past the engine cab; others thudded against boiler and tender. Another curve removed this immediate menace, but Boone knew the fatal moment was but briefly postponed.

A siding flashed by, where the Union men would be able to shunt the burning car.

"Jest another mile and the damn thing would 'a' tumbled to pieces and blocked the track," mourned Price. "Major, we ain't havin' no luck 'tall!"

Boone was of somewhat the same opinion. He glanced at the almost vanished wood pile, estimated the amount of water remaining in the tank. There was a chance, a slim one, that his fuel would hold out after that of the pursuers was exhausted. In which event, he would obtain such a start before they could replenish their supply, the chase would become hopeless.

The engineer set his jaw grimly, opened the throttle to the limit and settled himself to fight it out to the last stick of wood and the final drop of water.

All at once he slammed the throttle shut, shouted to Farley for brakes and leaned out the window to stare in incredulous anger.

Half a mile or so ahead was a gorge which the railroad crossed, or which the railroad *had* crossed. *It didn't cross now!* A Federal foraging party, scouting far ahead of the lines, or a too ambitious company of Confederate irregulars with hopes of delaying the enemy advance, had burned the bridge

which spanned the chasm. Charred timbers, blackened stones and twisted rail ends were all that remained of the trestle!

Boone heard the hammering of the pursuer's exhaust as his own engine He spun the engine brake loose, slammed the bar down in the corner and jerked the throttle open.

The amazed Federals, already slowing their engine, yelled loudly and discharged a volley. The bullets knocked

U. S. Military Railroad Train from City Point, Va., Taking Supplies to General Grant's Army in 1865. An Old Print Showing the Tracks of the Old South Side Railroad at Petersburg, Va., and (at the Left) Ruins of the Depot

jolted to a stop. He glanced at the thickly wooded country about him, contemplated the impassable gorge. No chance to get the records to Charlotte now. Get them there or destroy them, Wheeler had said. But how?

The answer came to him with the triumphant shouts of the pursuers as they boomed around the curve a few hundred yards distant.

"Unload!" he shouted to Price and Farley. "Make for the woods!

It was the commander of a battalion speaking now, and the two men obeyed unquestioningly. Boone saw them vanish in the undergrowth. Federal bullets snapping to right and left. splinters from the Confederate cab but did no further harm. Boone crouched low, his eyes on the gorge, black in the shadows of approaching night.

On rushed the doomed engine, rocking and swaying. Boone glided to the gangway, glanced once more at the chasm almost beneath his pilot, and leaped into the gathering dusk.

He struck a thick growth of brush beside the right-of-way, as he had planned, and crashed through to the ground. For a moment he lay half stunned, bruised all over, bleeding from numerous scratches.

He saw the roaring locomotive reach the gorge lip, seem to poise for an in-

stant. Then it took the leap, the cars clanging and clattering behind it, turned over slowly in the air, and rushed down!

Far below, the waters of a swift stream closed foaming over the wreck. General Wheeler's orders had been obeyed.

Boone slipped back into the brush as the baffled pursuers screeched to a stop opposite his hiding-place. A little later his low whistle brought Price and Farley to him and the three railroad men faded silently into the night to rejoin their distant command.

The Fall of Richmond

AFTER that, Boone Hatfield was ordered to assist with the railroad situation in Richmond, where General Lee was making a gallant effort to save the tottering structure of the Confederacy.

The young major made the trip by horse and by rail, forced to wide detours because of the enveloping movements of the victorious Federal armies. He had heard of the burning of Columbia, the South Carolina capital, and his thoughts often turned anxiously to the blue-eyed girl he had last seen there.

While Boone was pushing his way toward Richmond, he would have worried still more if he had known that the woman of his dreams was being held prisoner at Confederate Army Headquarters. How could he guess that Edith Stoneman was facing a danger more terrible than the flames and riot of Columbia—*the dark shadow of a scaffold that drew closer day by day?*

The guns of Petersburg and Richmond were bravely thundering defiance to the Union forces when Boone entered the city. General Grant, chewing at a cigar, was directing the boys in blue who hammered at the defenses of the Confederate capital. Day by day the United States Military Railroad was bringing supplies to the besieging army. General Lee, beloved by everyone who knew him, was never more brilliant and tireless than in those closing days of the war. Lee was moving his scanty troops from one threatened point to another as a master of chess shifts his pieces on the board.

Boone found much to do in the besieged city. He was in the railroad yards that bright April morning when the order finally came to evacuate Richmond.

Jeff Davis, Chief Executive of the Confederacy, remained in the doomed capital as long as possible. When the encircling ring of blue came so close there was danger of him being captured, President Davis reluctantly left under a military escort, turning his back on the last hope of a dying cause.

Confusion reigned, intense and far reaching. The railroad yards were the very center of activity. Boone appeared to be everywhere at once, directing, advising, routing trains that were to remove the government's effects and employees, handling engines himself at points where more than usual skill and daring were required.

Night came on, and with it the flames of burning warehouses and the thunder of exploding ironclads. The whole business section of the city was afire. Pillage and terror were rampant, despite stern efforts of the military to preserve order. Outgoing refugees jammed the railroad stations. No one seemed to know what to do.

Every Exit Was Blocked by Flames! "We've Got to Do Something," Boone Gasped

Boone determined to seek information from a reliable source. He left the railroad and headed for General Headquarters.

The streets were filled with drunken looters. Most of the gray-clad soldiers were fiercely loyal to their lost cause until the very end. But a few of them straggled from their commands and mingled with the crowds, adding to the general confusion. Pathetic scenes were enacted on all sides. The rumors that flew everywhere predicted even greater tragedies.

"The Yankees are coming! The Yankees are coming!" ran the wailing cry. Sickened by the outrages he was forced to witness, Boone fervently hoped that, if come they must, they would come soon.

The young Carolinian's uniform and his tall, broad-shouldered figure forced respect. Soldiers saluted, civilians stepped aside. Unhindered, he made his way to the headquarters building.

But instead of the officers he had hoped to interview there, Boone found a roaring mob bent on loot. The engineer forced his way into the corridors, glancing into room after room. He was almost ready to leave the building when he was startled by a scream.

THERE had been screams a-plenty during the night, but this one was different. It seemed to hold a note that tugged at the strings of his memory. Somewhere, sometime, he had heard that voice before. He hurried in the direction of the sound.

Again the cry came, fraught with terror. Boone dashed around the turn of a corridor and halted abruptly.

Before him was a room lighted by the flames of burning buildings beyond the windows, which rendered it bright as day. In the room was a desk and behind that desk crouched a girl.

Around the desk half a dozen bestial figures were slowly closing in on their victim. Boone knew them for the scum of the city's underworld—the rats who were too cowardly to fight a bold enemy but were all too ready to attack a helpless woman.

The girl raised her white face and, to his utter amazement, Boone recognized—*Edith Stoneman!*

Grim and wordless, the railroader leaped and struck. Men went down before his hammering fists. Yells and curses arose. Steel flickered in grimy hands.

Boone jerked his pistol and fired twice before the weapon was dashed from his grasp. He hurled the desk aside, swung the girl into the hollow of a protecting arm and plunged for the door.

"Hang on!" he told her.

The looters had recovered from their confusion and had lost their fear upon realizing that but a single man opposed them. They scrambled to block the exit.

They were too late. Boone made the corridor at the expense of several bad knife wounds and his scalp laid open by a blow from an iron cudgel. He reeled down the hallway, half supporting the girl, seeking the open air. Behind him surged the thugs in full cry.

He reached the outside. Men sought to bar his way, but the iron hand which had held many a throttle hurled them aside.

Before his pursuers could make their companions understand what was going on, Boone had gained a wide street and was guiding his companion between a row of burning buildings.

"Try and throw them off this way," he panted.

But the pursuit was closing in. Boone Hatfield had lost much blood and was weakening. Vaguely he sensed that the girl was now supporting him, urging him to greater effort. Instinctively he turned toward the railroad yards.

The situation there was terror-inspiring. The warehouses and the great mills flanking the railroad were burning. Shops were a welter of flame.

The fugitives stumbled over ties and rails, dodged between lines of blazing freight cars. Their flagging strength was renewed by the yells of the mob, swiftly drawing nearer.

A large building, which flamed fiercely, loomed in their path. Boone recognized it for a roundhouse. He sought to turn aside to avoid it.

To his horror he found that strings of burning cars hemmed them in on either side. Behind, the screeching mob charged home. A single door of the roundhouse loomed blackly. Unhesitatingly Boone made for it.

THE heat inside was terrific. Boone felt his muscles turning to water under the furnace blast. He halted, at a loss which way to turn. Behind there sounded a crash as a great mass of blazing timbers surged down to

block the door through which they had just come.

"It'll keep those devils out, anyhow," he told the blue-eyed girl who clung to him. "Something to be thankful for."

Edith shuddered, pressing close against him. "The fire is kinder, and cleaner," she replied in a low voice.

Even in that terrible moment the young engineer felt a sudden wave of tenderness he had never known before.

"We'll hustle across and get out a door on the far side," he decided; but saying it and doing it were two different things. *Every exit was blocked by flames!*

In the center of the roundhouse the two paused irresolute. The air was becoming unbreathable, the heat too intense to be borne. Sparks and embers rained down from the molten roof. It was but a matter of minutes until the entire structure would collapse over their heads.

"We've got to do something, quick," Boone gasped hoarsely.

His eyes roved over the building, frantically seeking some overlooked avenue of escape. Only the solid walls, the flame-filled doorways and the rows of silent engines met his gaze.

The engines, too, were doomed, he thought sadly. But then his nerve came back.

The engines! With one of them he could burst his way to safety. The impulse sent strength surging through his veins. Despair swiftly followed, however. Not one of the locomotives had steam up. Their fireboxes were dark, the water in their boilers was cold.

"Edith, we've got a chance!"

Boone shouted the words joyously. Seizing his companion's hand, the engineer dragged her to a big iron horse on a nearby track. He swarmed up the ladder to the top of the tender, swung the manhole cover back. He shouted again, a pæan of triumph. The tank was filled with water to within a foot or so of the top.

"Give me your hand, honey, up the ladder!" he called to the girl.

Edith obeyed, mounting the iron rungs with lithe grace.

"All right," he assured her. "Down into the water. Ladder there for you to stand on. It won't come over your head, anyway."

Edith slipped into the water, gasping at the chill bite of it. Boone squeezed in beside her and lowered the manhole cover, wedging a bit of wood beneath it to insure air.

"We'll—we'll freeze in here," the girl gasped between chattering teeth.

"No, we won't," Boone responded grimly. "We're more liable to boil. This water is going to warm up in a hurry when the roof falls in."

As an echo to his words sounded crashes. The tank clanged and rocked as heavy timbers thundered down upon it. Boone's heart skipped a beat as he dwelt on the probability of the engine being overturned. If their precious water were spilled from the tank, death would ensue in a few minutes.

The top of the tank was becoming unpleasantly hot. Boone spoke soothingly to the girl:

"Lean forward against my arm until your face is just barely above the water. That's right, dear. No, it's no trouble to hold you that way. It rests me, in fact."

Desperately he fought against the strain of her sagging weight, enduring the ever increasing heat of the rusty iron so close to his face. A searing blast poured in through the narrow opening beneath the manhole lid.

Outside, sounded louder crashes as more and more of the burning roof fell in. With a low thunder, a section of wall went down.

Fanned by the resulting draft, the fire burned more fiercely. The faithful old engine rocked to the impact of débris raining upon it.

"Can't stand much of this," Boone muttered to himself.

His head was aching with a steady, splitting throb. He could feel the flesh of his face and neck scorching under the heat of the tank top, now glowing a dull red. He was weak from loss of blood, sick from the pain of his wounds. But he still stood stolidly in the slightly steaming water, shielding his companion from the torrid blasts.

"What the devil?"

Boone blinked stupidly in the semi-darkness of the tank. He raised his left hand above the surface of the water, dropped it again, carefully.

Yes, without a doubt, the surface was lower. His straining ears caught a slight gurgling sound and he knew.

The leather hose running from the tank to the boiler intake had burned in two; *the water was escaping!*

With a chill of horror, Boone realized that their only safeguard was being swiftly dissipated. Empty, the tank would become but a red-hot shell in which nothing could live. He spoke to the girl, but she hung limp against his arm. Edith Stoneman was unconscious.

Boone was glad of that. He hoped she would remain so until the end came. He crouched lower as the water ebbed. It was a relief to get away from the fiery blast of the tank roof. He glanced at the manhole crack, wondering how long the air would remain breathable.

Lower and lower. Boone was on his knees, supporting the girl's white face above the water level. The water continued to gurgle through the burned hose. The air inside the tank was growing warmer.

"Won't be long now," he whispered tensely, and his lips moved in silent prayer.

Boone's head was whirling, his eyes could no longer see. With his last strength he gently lowered the girl to the muddy tank floor, which was barely awash, striving to protect her with his body from the heat blasts beating down from the glowing roof.

He thought of his gentle mother, of the white-pillared home down in Carolina which he would never see again ...

DARKNESS closed about the dying fires of the burned roundhouse. In the streets beyond sounded the uproar of the looters. Far away, a band was playing. Somewhere to the north a bugle called sweetly as Grant's weary fighters prepared to march into the city they had striven against so long. But inside the burned and blistered engine tank, two figures lay without sound or movement, unheeding the turmoil nearby, unconscious of the sounds that told of the ending of long drawn terrible conflict and the dawn of peace.

As the early morning sunlight streamed over the burning city of Richmond, a detail of Federal soldiers patrolling the railroad yards were startled by a woman's voice calling for help.

The sound came from the jumbled ruin of a burned roundhouse. They battered their way in and gathered around the wild-eyed girl who stood beside a blistered engine tank. Quickly they drew a burned and bloodstained figure through the manhole, gazing re-

spectfully at the major's insignia decorating the gray uniform.

An officer came, listened to the girl's swift words. His hand snapped up in salute, his orders were brief and to the point.

BOONE HATFIELD came back to consciousness after long days of raving and fire-wrapped dreams of horror. He awoke on a bright spring morning, weak but with a clear mind. By a prodigious effort, he turned his head to gaze into the face of Edith, who sat by his bed.

She, too, was pale from long nights of tireless vigil, but there was a light in her eyes that needed no explanation. Boone reached out a thin hand; their fingers clung together.

"Well, well," boomed a hearty voice. "Come back to life again?"

Boone glanced up in astonishment. "Tom," he whispered, wondering why his voice was no louder, "where in tarnation did you come from?"

Major Tom Raleigh chuckled. "Been hangin' around here quite a spell waitin' for you to get well."

"Tom," Boone urged, "you'll look after Edith until I can be up and around, won't you? Suppose I'm a prisoner again, but don't imagine I'll have much trouble arranging to be exchanged."

Raleigh chuckled again. "Don't guess Edith needs much lookin' after," he said, "she's kinda able to look after herself. You see, Boone, she is really Secret Service Operator Number Eleven. That is, she was; and her last name isn't Stoneman at all."

"What!"

"Surest thing you know. She usually does more of a job of lookin' after me than me lookin' after her. Her whole name is Edith Stoneman Raleigh."

"Your sister?"

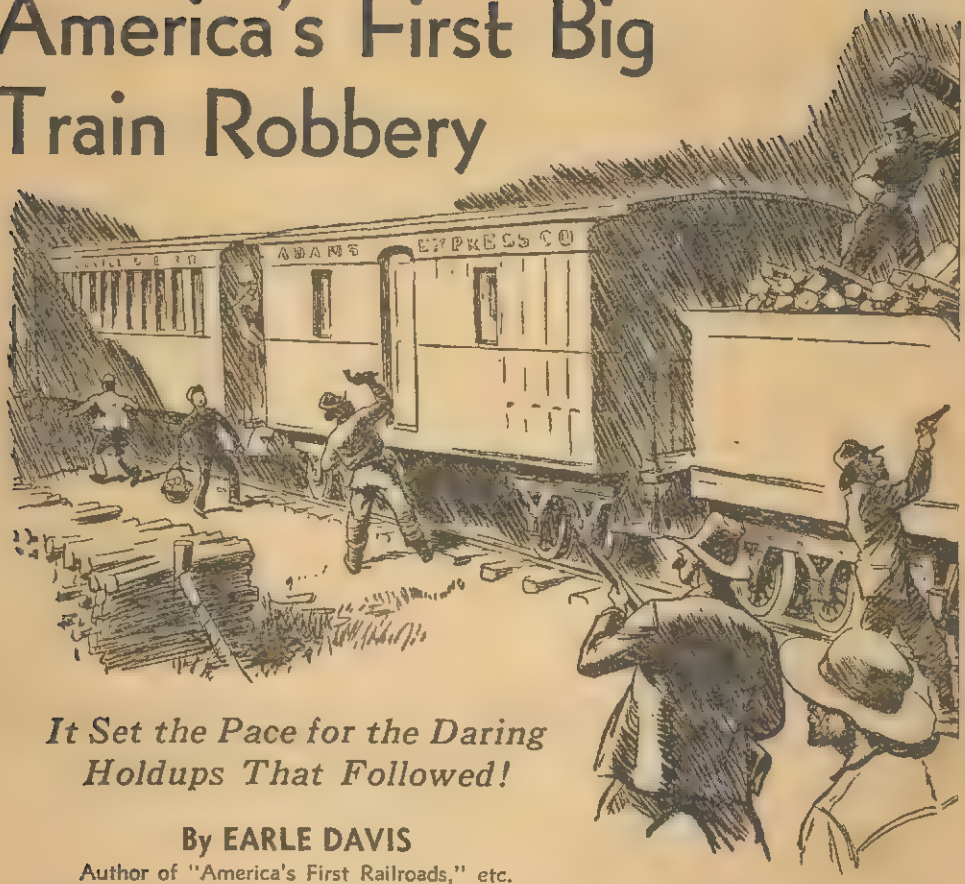
"Uh-huh." Tom glanced from Boone's face to that of the blushing girl, and back again.

"Blue eyes and gray eyes," he mused, almost to himself. "Blue and gray. Well, I guess it's about time the Blue and the Gray was gettin' t'gether. You're no prisoner, Boone, my boy. Peace has been declared. Any fightin' between the Hatfields and the Raleighs from now on will have to be a family affair."

Boone smiled wanly. "And, Tom," he whispered, "now that this war foolishness is over, you and me can get back to serious business and something worth while—*back to railroading!*"

THE END

America's First Big Train Robbery



It Set the Pace for the Daring Holdups That Followed!

By EARLE DAVIS

Author of "America's First Railroads," etc.

THE night of Friday, May 22, 1868, hung dark and rainy over the deserted village of Marshfield, Indiana, twenty miles from Seymour. Marshfield was on the main line of the Jefferson, Madison & Indianapolis Railroad, but no trains stopped there save for fuel and water.

On one side of the track stood the water tower, buried in shadow, while on the other, a few yards farther on, were two or three log houses and an old sawmill. Near them were neatly stacked piles of cordwood, ready to be loaded onto the tenders of passing locomotives. At that time only wood-burning power was used on the J. M. & I. Previous to 1866 this division was known as the Jeffersonville R. R., but that year it joined the Madison & Indianapolis to form the J. M. & I.*

Great clouds obscured the moon and stars. The wan glow of an oil headlight tried feebly to pierce the gloom as a train pulled up at Marshfield. There was no other light except the dull illumination of oil lamps in the engine cab, in the Adams Express Company car, and in the three wooden coaches.

**169 miles, 39 locomotives, 32 passenger coaches, 11 baggage cars, 543 freight cars; now part of P.R.R. System. The first engine of the Madison & Indianapolis today lies at the bottom of the Atlantic Ocean. It was shipped from the Baldwin plant via New Orleans on a sailing vessel, but had to be tossed overboard in a storm.*

When the train stopped, the fireman got off his side of the cab to let down the water spout. The engineer descended also, with the inevitable long-necked oilcan and a torch, and began to oil his engine. He had finished the right hand side and was passing around to the left when the t o r c h was rudely knocked from his hand by a blow in the darkness, and a harsh voice demanded:

"What in hell do you think you're doing?"

The engineer gasped in amazement. "I'm oiling this engine. Who—"

"Oh, no, you ain't," snarled the voice. "You're stayin' right here with me. The engine's goin' away on a little journey."

The engineer and fireman were too surprised to offer resistance. One stranger kept them covered with a revolver, while a second pulled the pin from the coupling that connected the express with the passenger coaches, and a third climbed into the cab, released the brakes, and opened the throttle.

Meanwhile, the conductor, Americus Wheeler, riding the last car, heard a murmur of voices in the quiet night.

Turning to the "news butcher," the boy who sold periodicals and candy to the passengers, he said:

"Go outside, sonny, and see who's getting on."

The boy went out. Half a minute later he rushed back excitedly. "There's three or four men trying to get into the express car!"

This alarmed the conductor. He ran forward, just in time to see the train cut in two. The old balloon-stack locomotive chugged ahead with the express car. Wheeler whipped out his cap-and-ball pistol and fired at the men who were obviously bent on robbing the train.

Temporarily caught off guard, the strangers fell back a second. Then their leader yelled derisively:

"Here's a damn fool that wants to get shot full of holes. Give it to him, boys!"

As a fusillade of shots rang out, Wheeler slipped into the shelter of the doorway, but fell to the floor, wounded in the knee. The first organized train robbery in America was under way!

THE iron road was comparatively free of bandits during the first forty years of its history. In fact, until after the Civil War. From 1861 to 1865 armed guerrillas had terrorized the border states in the Mississippi Valley, occasionally robbing trains on the plea of military necessity. When hostilities ended, the guerrillas disbanded as military units and many of them became outlaws. It was then that railroad holdups became a national menace.

At Rockford, Indiana, two miles from Seymour, there lived four Reno brothers, Johnny, Frank, Bill and Simon. During the war they had fought as irregulars, pillaging wherever they could. In 1866 they began to perpetrate train robberies on a small scale, gradually perfecting the technique that was copied a few years later by Jesse James and his brother, Frank.

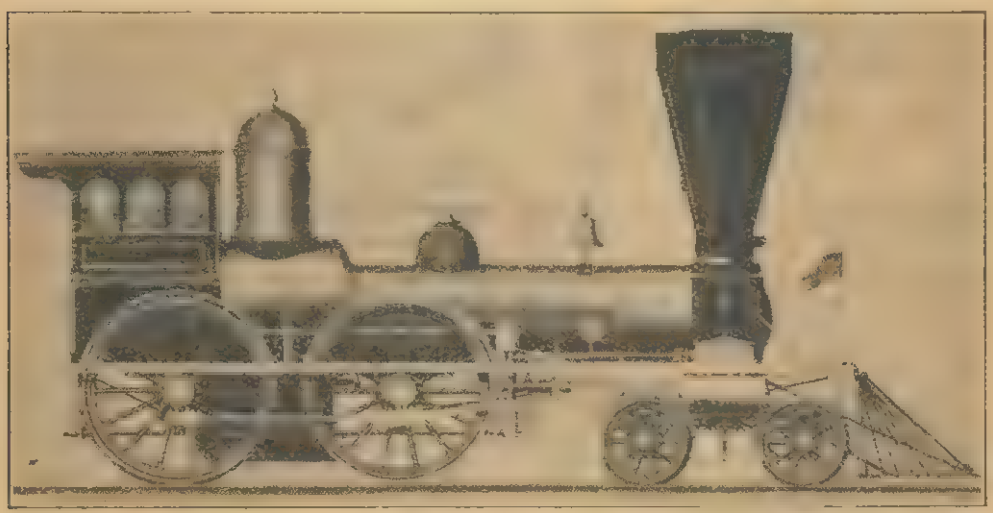


Photo from R. C. Schmid, Room 1415, 466 Lexington Ave., N. Y. City.

Engine "W. G. Armstrong" of the Jeffersonville R. R. Constructed in 1853, It Was the Second Locomotive Built by the Famous William Mason, Whose First Engine, the "James Guthrie," Was also Made for the Jeffersonville. "W. G. Armstrong" Had 13½ x 22 Cylinders and 66-Inch Drivers. Later It Became No. 11 of the J. M. & I.

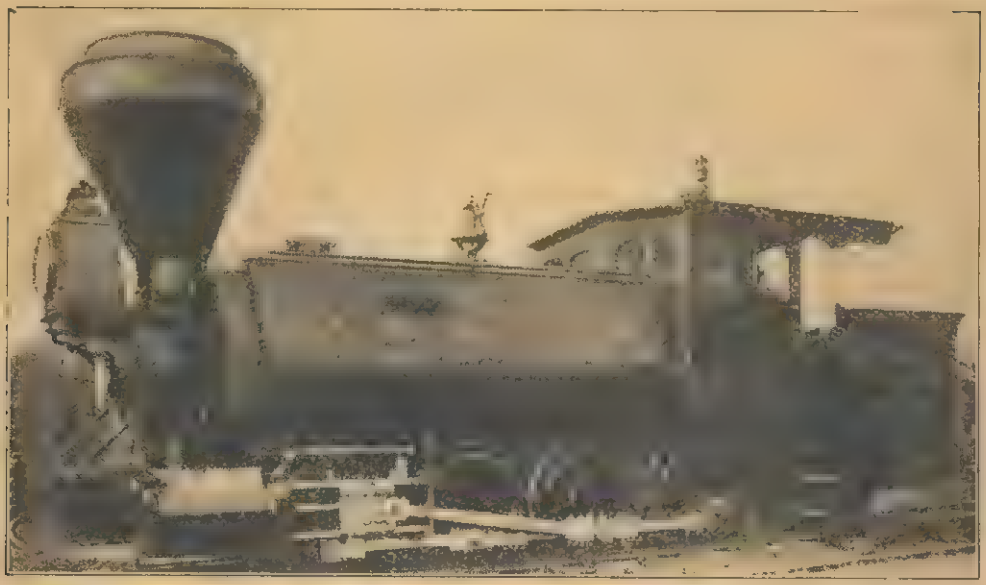


Photo from R. C. Schmid

The "M. G. Bright," Built by Baldwin in 1850 as Jeffersonville No. 34, Later Became No. 634 of the J. M. & I. A Rack Rail Engine, It Was Used on an Inclined Plane. In 1877 It Exploded, Killing the Engineer and Injuring Two Others

The Renos not only practiced banditry in a modest sort of way, but they claimed a monopoly in that section of Indiana. They were deeply chagrined, in 1867, to learn that an Adams Express car on the Ohio & Mississippi Railroad* was robbed in their territory by two "free lances," Walt Hammond and Mike Collins, who took $6000.

"Are we goin' to let these damn poachers get away with it?" demanded John Reno, oldest of the brothers.

"No!" roared Frank, Bill and Simon.

Mounting fast horses, they trailed Hammond and Collins and seized the booty for themselves. Besides losing their money, the "damn poachers" soon found themselves locked up in the Indiana State Penitentiary. The Reno gang had scored their first victory. Thereafter they became bolder, raiding county treasuries and banks in Indiana, Iowa and Missouri.

Their first setback came in 1867, when John was trapped by Pinkerton detectives and given twenty-five years at hard labor in the Missouri State Penitentiary. That finished his career. Frank took over the leadership.

One day Frank Reno, Albert Perkins and Miles Ogle, all members of the gang, were arrested in Iowa and thrown into jail. In some mysterious manner all three escaped. And a few weeks later they planned and executed the Marshfield robbery.

Eight or ten men hiding in the shadows at Marshfield captured the train. Frank, who knew how to run a locomotive, took the throttle and headed northward with the express car. While traveling at a fairly high rate of speed, the other members of the gang, who had boarded the head end, pounded the door of the express car.

"Open up, or we'll blow your head off!" they shouted to the express messenger, Thomas G. Hawkins.

*Now part of the Baltimore & Ohio.

But Hawkins refused to obey, so they forced the door with tools from the engine cab, and knocked him on the head.

Inside the car they found two safes, both locked.

"Give us the keys!" The demand was coupled with terrible threats and embroidered with profanity.

At first the heroic messenger was too dazed to understand what they were talking about. Barely conscious, he stared at them blankly. Gradually it dawned on him what was wanted.

"Keys?" he muttered. "I ain't got no keys. Them safes are locked at one end of the run and unlocked at the other."

Angry protests arose.

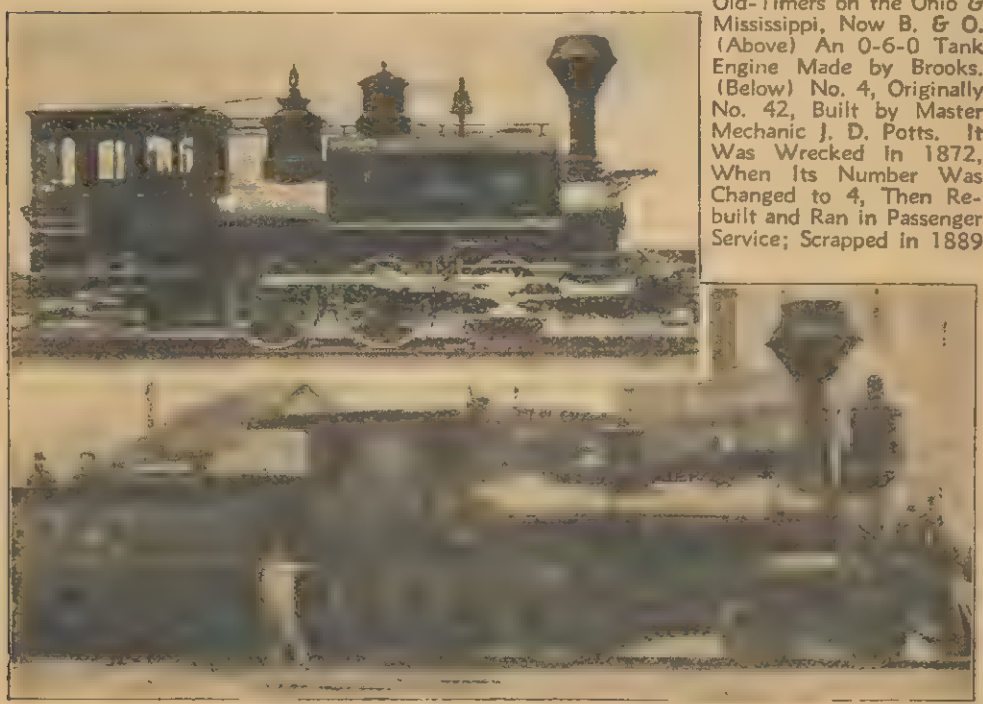
"I tell you, they're through shipments," he persisted. "I ain't got the keys."

"Well, that's jest too bad," sneered one of the outlaws. "What do you say, boys? Shall we send 'im out to look for the keys?"

A chorus of assent greeted these words.

UNLOCKING one of the side doors, while the train was still running, the desperadoes seized protesting Tom Hawkins and hurled him out into the darkness. With a wild shriek, the messenger rolled over and over, down an embankment. Finally he lay still, seriously wounded but still alive. A searching party found him a few hours later.

Meanwhile, the Reno gangsters pried open the old-fashioned safes and looted them. More than $97,000 worth of loot was taken, largely cash, some government bonds. The treasure had come from Nashville and Louisville, most of it for New York banks.



Old-Timers on the Ohio & Mississippi, Now B. & O. (Above) An 0-6-0 Tank Engine Made by Brooks. (Below) No. 4, Originally No. 42, Built by Master Mechanic J. D. Potts. It Was Wrecked in 1872, When Its Number Was Changed to 4, Then Rebuilt and Ran in Passenger Service; Scrapped in 1889

Photo from Collection of Joseph Lavelle, 4615 66th St., Winfield, L. I., N. Y.

Reaching a point about a mile south of Seymour, the gang deserted the locomotive and car, and scattered.

The engine and train crew had been left back at Marshfield with the passengers and three coaches. As soon as the smoky end of the train vanished into the night, a group of them walked six miles to the nearest telegraph station and wired to Seymour for aid. A locomotive, with armed guards aboard, was sent to Marshfield to pick up the three stranded coaches.

Fortunately the numbers of the stolen bonds and the large-denomination greenbacks had been kept on record. Circulars containing this list were sent to banks all over the country. Huge rewards were offered for apprehension of the criminals. Railroad detectives as well as state and county officials took up the chase. It was the greatest man-hunt the country had ever known in connection with a train robbery!

For weeks no definite clue could be obtained. Then a man named George Cameron tried to sell some of the stolen bonds in Syracuse, N. Y. The securities were recognized. Cameron was arrested and quizzed.

"I bought those bonds from Frank Reno and George Anderson," he said, "but I don't know anything about the robbery except what I read in the newspapers."

As Allan Pinkerton had captured Johnny Reno the year before, he was given charge of the case. He undertook personally to run down Frank Reno, while his son, William Pinkerton, trailed other members of the gang.

Efforts to bring the criminals to justice were concentrated on digging up evidence in and around Seymour, and at the same time endeavoring to trace the bandit chief and Anderson. The latter proved to be a notorious English burglar.

Finally the two desperadoes were located in Canada. They had fled to Sandwich, Ontario, just across the border from Detroit, Michigan. Both were too wily to be lured back into the States over the Detroit River. And it was not possible to extradite the men because train robbery, a comparatively new offense, was not covered by the extradition treaty between the United States and Canada.

Elated over their success in having eluded capture, the rest of the Reno gang, after keeping quiet for a short time, decided to rob an Adams Express car on the Ohio & Mississippi Railroad.

JAMES FLANDERS, engineer on the train that was picked for the holdup, got wind of the plot several days beforehand. The railroad company granted him a confidential leave of absence to do what he could to clear up the mystery.

Flanders loafed around Seymour awhile, making the acquaintance of six members of the gang—Val Elliott, Frank Sparks, John Moore, Charles Roseberry, "Lefty" Clifton and Henry Jarrel It was not long before they let him in on the secret that they were going to rob an eastbound train leaving St. Louis at 3 P.M. July 10th. The robbery was to take place at Brownstown, ten miles from Seymour.

Flanders informed officials of the Adams Express Company, who placed a strong guard in the car. Then the engineer went back on his regular run. Making the usual stop at Brownstown, he got out of the cab, ostensibly to oil around the engine. Back in the cab again, he was instantly attacked by three of the gang with cocked revolvers

pressed against his head. One of the pistols was jammed into his eyes so hard that they were badly hurt.

"Hands up!" cried Val Elliott, the acknowledged leader of the gang.

Classy Travel! Typical Scene in a Pullman Car About the Time of the Marshfield Robbery

Flanders reached toward the sky.

"And now, if you don't mind," he said, "I'd like to start the pumps, so the engine won't burn up."

The gunmen grumbled acquiescence. When the pumps were started they hurled Flanders and his fireman out of the cab. Elliott took the throttle for three or four miles, then stopped the engine. The freebooters leisurely undertook to examine the contents of the express car, which they supposed to be already theirs.

To their amazement, they were confronted by the armed guard. This was a signal for battle. Both sides fired many shots. For a time the result was in doubt. Then Elliott was shot in the leg, and they all beat a hasty retreat.

A few days later Elliott, Clifton and Roseberry were arrested near the scene of the crime, and on the night of July 20th were put on a train bound for Brownstown. About three miles west of Seymour a red light was placed on the track by members of a vigilance committee concealed in a near-by thicket. As the train ground to a halt, a mob clambered aboard, overpowered the guards and seized the prisoners.

A noose was placed around the neck of each of the three men.

"If you know any prayers," said a grim, hard voice, "you'd better say them fast. You've got just five minutes to live."

The captives begged in vain for mercy, but finally broke down and confessed. They also admitted knowledge of the Marshfield affair, each blaming the other two and denying any personal connection with the crime.

In order to allow time for a complete confession, the deadline was extended to half an hour, at the end of which the ropes were drawn and the

wretched bandits were launched into eternity. Train robbery in those days was about as popular as horse stealing in the pioneer West, and met with the same punishment.

Next day the vigilantes posted copies of the following proclamation in the town of Seymour and for miles around:

ATTENTION, THIEVES!

The attention of all thieves, robbers, assassins, and vagrants, together with their aiders, abettors, and sympathizers, is called to the doings of the Seymour Vigilance Committee last night. We are determined to follow this up until all of the classes above named are driven from our midst.

Threats have been made of retaliation. In answer we say: "Should one of our committee be harmed, or a dollar's worth of property of any honest man be destroyed by persons unknown, we will swing by the neck, until they be dead, every thieving character we can lay our hands on, without inquiring whether we have the persons who committed that particular crime or not."

By Order of the Committee.
Seymour, Ind., July 21, 1868.

UNRELENTING pursuit was pushed for the other three Brownstown robbers, who were still at large. Captured at last in Mattoon, Illinois, they were put in a wagon with a guard—the officers were taking no chances on another train!—and were driven toward Brownstown, to be delivered to the county sheriff. But when they reached the spot where their luckless comrades had met doom, the three men were seized by vigilantes and hanged to the same tree!

Bill and Simon Reno learned the gruesome tidings, and tried to skip the country. Too late! Their pictures and descriptions had been circulated far and wide; large rewards were on their heads. The brothers fled as far as Indianapolis, where they were caught. To avoid a repetition of the lynching, the prisoners were kept in the county jail at New Albany.

For nearly five months they remained there, and the authorities began to believe the men would eventually get a fair trial. Meanwhile, on August 8th, Frank Reno, leader of the gang, and George Anderson were arrested in Windsor, Canada, accused of attempt to kill Americus Wheeler, the J. M. & I. conductor.

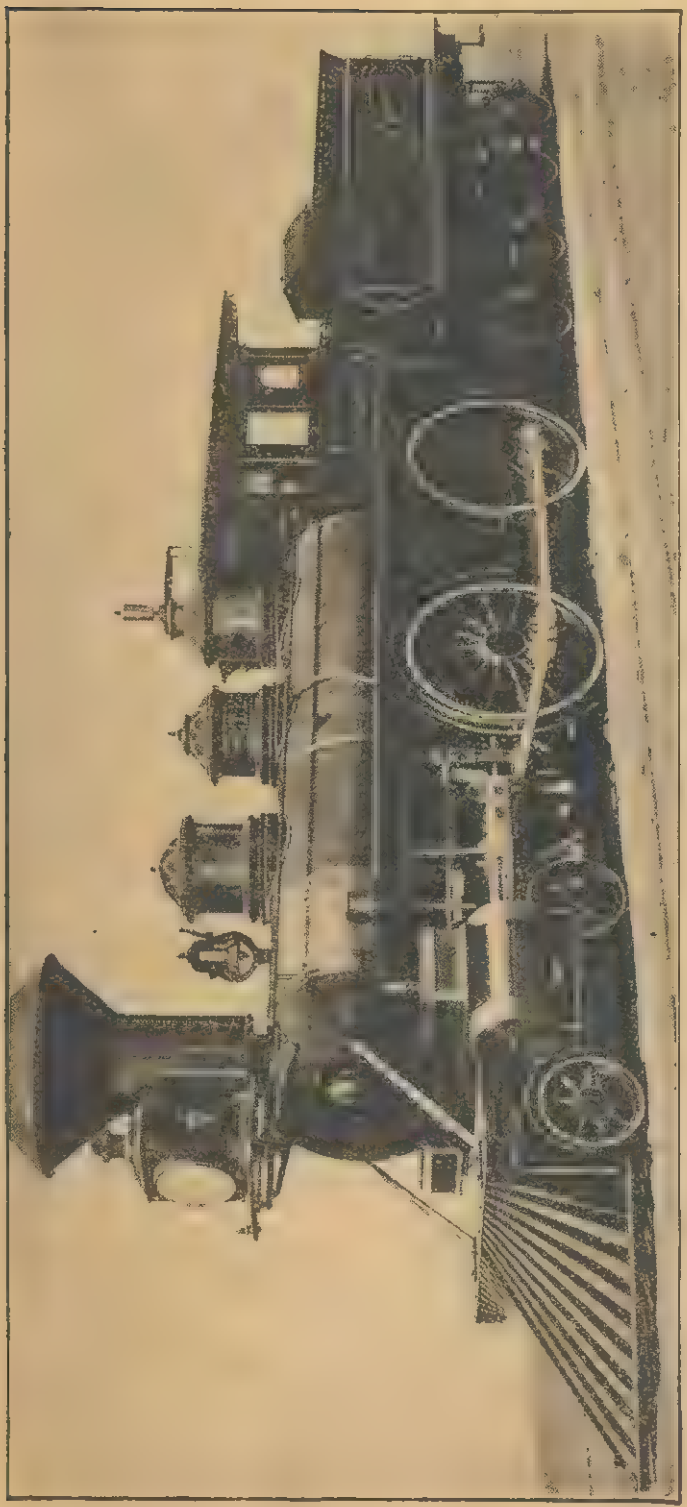
Combating the case with the money they had stolen, the two men caused the arrest of Allan Pinkerton and L. C. Weir, the Adams Express Company prosecutor, on a perjury charge. Reno and Anderson insisted that the crime charged against them was not extraditable and fought in the Canadian courts. This legal battle led to a revision of the international extradition laws, so that in the future fugitives from American justice, especially train robbers, could not find sanctuary in Canada.

Through a ruling of the chief justice at Toronto, Frank Reno and George Anderson werre sent back to Indiana and were put in the New Albany jail with their accomplices.

Thus three of the Reno brothers, Frank, Bill and Simon, were reunited under the same roof. The fourth, it will be recalled, was serving a stiff sentence in the Missouri State Penitentiary —a fact which, incidentally, prolonged his life.

Preparations were made for a courtroom trial for the train bandits, but fate had a more sinister ending in store.

AT 11 P.M. on Friday, December 11th—less than seven months after the sensational Marshfield robbery—a grim vigilante committee of about seventy men made a six-mile



This Graceful Eight-Wheeler Was Ohio & Mississippi No. 118, Baldwin-Built in 1871. From Joseph Lavelle Collection

journey from Jeffersonville to New Albany by train. Each was well dressed, wore a red flannel mask, and was armed with a stout club, one or more revolvers and a slingshot.

Their first act was to cut all telegraph wires. Then they placed patrols along the street from the railroad to the jail and threw a strong guard around the prison. Luther Whitten, the sheriff's night watchman, was overpowered and tied hand and foot.

Awakened by the noise, Sheriff Fullenlove hurried down in his nightgown and ran into a dozen men all armed with pistols pointed directly at him.

He raised a hand in protest. "Gentlemen, don't shoot! I am the sheriff."

Ignoring this plea, one of the gunmen shot him in the arm. This enraged the sheriff, who knocked the fellow down with a revolver butt.

"Give us the keys!" demanded a spokesman.

Sheriff Fullenlove flatly refused.

"Your wife will tell us where they are," retorted the vigilante; but Mrs. Fullenlove, also in sleeping attire, proved to be as firm as her husband.

Threatening violence, the intruders ransacked the sheriff's office in search of the keys. Unsuccessful, they turned to the cell room. Thomas Matthews, one of the guards, warned them away.

"I'll shoot the first man who tries to unlock this door!" he cried.

The mob spokesman brandished a rope at him.

"As soon as you fire a shot," came the challenge, "we'll break down the door and string you up!"

Matthews opened the door on condition that his life would be spared. He was seized, tied and thrown into the room with the other captured guards. At the same time his keys were taken.

One by one the cells of the doomed men were unlocked. The last chapter in the Marshfield robbery case was about to be ended in letters of blood.

The cell house in the New Albany jail was divided into two tiers, upper and lower. Around the upper tier ran an iron girder, supported by strong iron pillars. From this girder Simon Reno was hanged. Barefooted and wearing no clothing except shirt and pants, he was dragged shrieking and cursing from his cell, hammered into submission, and rushed to his death.

Frank Reno, leader of the gang, was number two. After a desperate battle for life, he was knocked unconscious by a sling-shot, and was hanged in the corridor, and brother Bill beside him.

The last victim, George Anderson, offered no resistance but begged for time for prayer, which was denied him. They strung him up outside the jail; also without a chance to say a word in his defense, although he and Frank Reno had been surrendered by the Canadian authorities upon the solemn pledge of the United States Government that they would be given a fair trial and, if found innocent, be returned to Canada.

After the lynching committee had completed their self-appointed task they left the jail, locked the door, carried away the keys, and took a 4 A.M. train back to Jeffersonville.

Thus ten members of the Reno gang which had perpetrated America's first big train robbery were all captured by officers and killed by mob violence.

PRIZE WINNERS IN "RETURN OF CASEY JONES" CONTEST

TWENTY-NINE prizes have been awarded for letters about the Monogram film version of John Johns' novelette, "Return of Casey Jones," as follows: FIRST, $100.00 in cash; Arthur Pellissier, truck driver, former railroad machinist in P. R. R. Meadows shops (1927-1931), 261 Summit Ave., Union City, N. J. SECOND, Lionel train outfit valued at $77.50; Richard Young, high school student, 935 Hayes Ave., Oak Park, Ill. THIRD, Lionel train outfit valued at $33.10; Harry H. Harrison, laborer, former S. P. brakeman, 408½ N. Boyle Ave., Los Angeles, Calif. FOURTH, Lionel train outfit valued at $25.65; Elwin K. Heath, shipping clerk, Box 15, Barre, Vt. Each of the following gets a year's subscription to "Railroad Stories":

Clifton E. Welk, hogger, 52 years railroad experience, Springfield, Mass.; A. W. Weiland, ticket clerk, Union Terminal, Cleveland, O.; H. M. Hagensick, Ky. Express Agency chauffeur, McGregor, Ia.; John W. Thorpe, son of Mich. Cent. engineer, Niles, Mich.; D. J. Mallett, N. Y. C. fireman, Watertown, N. Y.; Don Broomfield, Santa Monica, Calif.; W. F. Martin, Holbrook, Mass.; W. M. Bryan, Jr., Durham, N. C.; Don Hunt, Los Angeles; Harold Lesserschin, Bronx, N. Y.; Pvt. J. H. Stewart, Fort Lewis, Wash.; W. H. Smith, Los Angeles; J. G. Reardon, Eldon, Ia.; Harry Ossoff, N. Y. City; Albert Crosby, Shelby, N. C.; G. W. Booth, Los Angeles; B. H. Nichols, E. Cleveland, O.; F. E. Patterson, Hazard, Ky.; Robert Mac Parland, Edet, O.; Paul Sansbury, Darlington, S. C.; R. J. Ryan, Albany, N. Y.; W. Ferrington, Detroit, Mich.; Paul Moser, Springfield, Mo.; Roland Peeples, Cleveland, O.; J. E. McNevin, Denver, Colo.

Stamps Depict Engine History

By W. S. BOGGS

Courtesy of "American Philatelist" (Slightly enlarged)

FOR the first time, the development of the steam locomotive is shown on a series of postage stamps. This set of four was issued by the Egyptian Government in connection with the meeting of the International Railway Congress at Cairo this year.

The contrast between the "tea kettle" of 1852 and the big "jack" of today is startling. It serves to remind us that the old "iron horse" has moved with the times—plenty of fight left before the electric giants have undisputed sway.

Most of the Egyptian motive power is of English manufacture and comes from the famous locomotive works of George Stephenson & Son, or Beyer, Peacock & Co. The early engines usually had one pair of huge drivers; typical express engines in England until the late '90s and a favorite in Egypt for some time later.

As crude looking as the early engines were, they were well built, and some delivered in 1855 were still in use as late as 1902. Forty-seven years! What an advertisement for their builders! Our friends across the seas don't believe in scrapping anything as long as there is a wheeze left in it.

The first locomotives for the railway between Alexandria and Cairo were built by George Stephenson & Son, of Darlington. They had two pairs of drivers connected by side rods. They had inside cylinders and were "simples"; that is, the steam was used only once, and did not exhaust into another set of cylinders for further expansion.

The domed boiler was typical, but the cab was liberal for those times.

The early builders were not partial towards "coupled" wheels, as they reasoned, "how could a locomotive with its legs tied make any speed?" So in 1859 Egypt received again from Stephenson & Son the rather ornate affair we see on the 13 mil. stamp. This had one pair of large drivers, and could make considerable speed. All the ornamentation was for a special purpose —this happened to be for the Viceroy of Egypt, and that worthy liked his decoration as flamboyant as possible.

On the third stamp we see what arrived three years later, in 1862. This was from Beyer, Peacock & Co., and is a very neat job. Locomotive lovers are immediately reminded of the grand old engine designed by that grand old engineer, Patrick Stirling, for the old Great Northern Ry. of England, now part of the London & Northwestern.

These single drivers slipped badly when starting, but once they got going they went right along, at high speeds, the enormous drivers covering a lot of ground at every revolution. The lack of oscillation due to connecting rods and counter balances made them exceptionally smooth running, especially if they had inside cylinders, as so many did. Unfortunately the engineer and fireman received scant consideration, as the apology for a cab shows.

Succeeding years brought mechanical improvements, but the general form has remained the same, so that one may say that the modern locomotive and the old "single drivers" are "brothers under the skin."

Today the Egyptian locomotives are the powerful modern-looking machines we see on the last stamp of the series. So big are they that they have outgrown the stamp, and only the locomotive itself can be shown!

A regular man-size cab and a "cowcatcher" are features most noticeable to American eyes. After these many years, cowcatchers! They probably have to toss automobiles out of the way, even as they do over here!

We are so used to our luxurious expresses, that we overlook the fact that other countries have their crack trains equal to the best. Egypt is no exception, having the tourist trade that she does.

The Egyptian Railways are mostly State owned and are over 2000 miles in length. The main line is from Alexandria and Cairo, "mile by mile along the sunny Nile" to Assam, where connections are made for the Soudan. Over thirty million passengers a year are carried, and the general working is efficient and up to date.

(Additional information on railroad stamps will be printed from time to time if enough readers indicate their interest in this subject by filling out the "Reader's Choice" coupon on page 130.)

INSIGNIA OF THREE BRITISH RAILWAYS

(Above) London & North Eastern Ry. (Right) Great Western Ry.

(Above) London, Midland & Scottish Ry. (Left) Crest of the Same

TRUE TALES OF THE RAILS

Actual Happenings Told by Eye Witnesses

Photo by R. B. Jackson, 154 N. Crescent Drive, Beverly Hills, Calif.

The End of the South Park Line at Leadville, as It Looked in 1929

The Great Old South Park

By M. S. GOODALE

THE Colorado Rockies—who can describe them? And the railroads which crossed them! They were man's monuments to his own ability and bravery. What real boomer could not say that he had worked on the Denver & Rio Grande, the Colorado Central, or the Colorado Midland? It was the adventure of a lifetime to hold down a job on one of them.

But the greatest, most glamorous of them all was the Denver, South Park & Pacific, familiarly known as the "South Park." It, or what is left of it, is now sixty years old—ten years older than the Colorado Midland would be if it were running today. It was planned to run from Denver to California, to be a mighty main line system. And although it never got to the western border of the State of Colorado, this three-foot gage pike can stand up with the best of them.

When I began work on the South Park back in 1879 it ran from Denver to Buena Vista. Then it was built southwest across the Continental Divide, through the famous Alpine tunnel, and into Gunnison, Colo. A few years later a branch was constructed from Como to Leadville, via Breckenridge and Boreas Mountain. In this

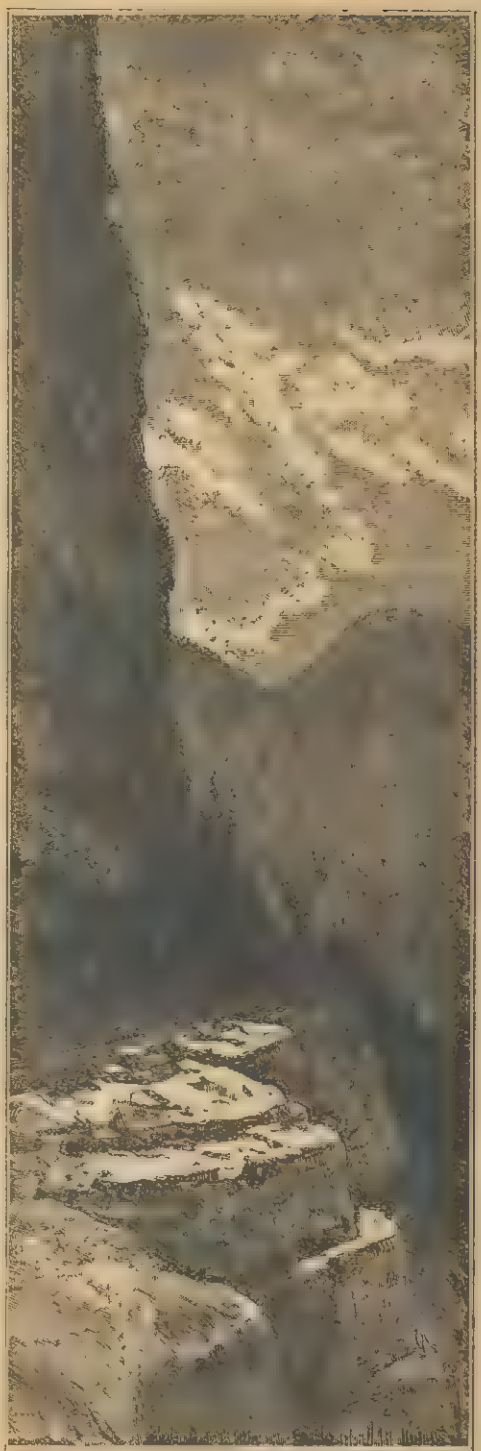
way the narrow gage D. S. P. & P. finally commanded a 150-mile short line from Denver to Leadville.

Leadville was booming. The famous mining king, H. A. W. Tabor, had just sold his "Little Pittsburg" silver mine for a cool million. He was beginning his speedy rise to wealth and power. Already Leadville had 30,000 population—more than it has ever had since. The Denver & Rio Grande ran eight passenger trains in and out of the town every day. Promoters were starting work on the now famous Colorado Midland. All in all, Leadville was a rough, roaring, booming city.

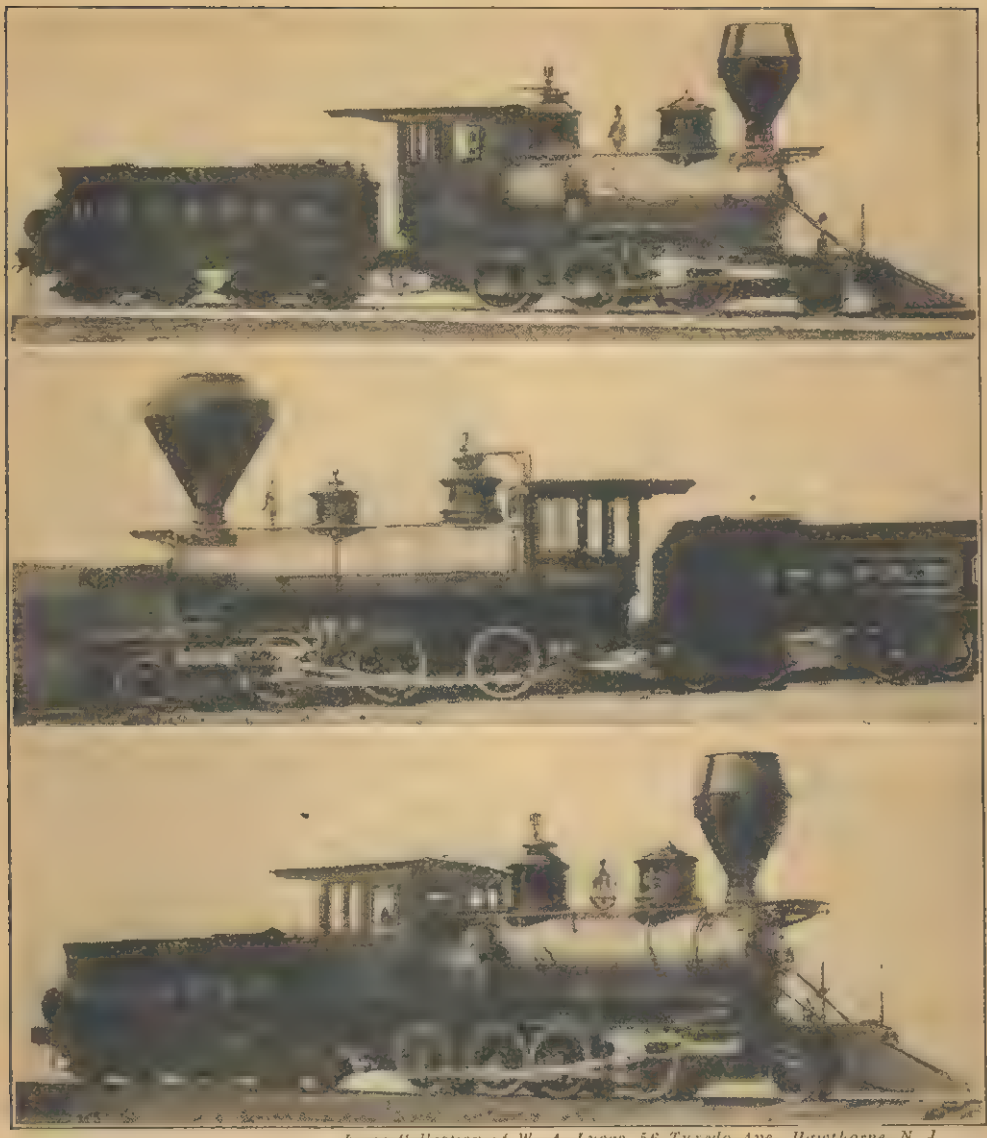
I can still remember the large saloon run by Ike Goldsmith and Ben Lob. These two men wore large diamonds and had more business than a butcher's dog. But under no circumstances would they fight. When cornered they would call their bouncers and throw the offending party or parties out.

I can remember, too, the stiff grades on the Leadville line. Some of them were more than four per cent; it required three engines to take 14 cars up Boreas Mountain, for example. But the old-time railway officials were generous. They ordered us down old Boreas with fifty or more cars. The helper engines were coupled in the middle of the train, for the grade was so steep they weren't able to run back down hill without a train for braking power!

In those days we used the old "wind-jam" or Eames vacuum brakes. If you broke in two it was good-by and farewell. And in case you started to run away it was useless to set the hand brakes, for as soon as you started to tie one down the train would enter a low snow shed, and you'd have to lie flat on the running board to keep from knocking off your head. As al-



A Magnificent View on the Old South Park West of Alpine Tunnel. Track Now Abandoned



From Collection of W. A. Lucas, 56 Tuxedo Ave., Hawthorne, N. J.

Typical Motive Power of the Narrow-Gage South Park. (Top) No. 71, One of Ten Similar Moguls Built by Cooke in 1884. (Center) The "Dillon," also One of Ten Moguls Made by Brooks in 1882. (Bottom) "Heavy" Consolidation Type No. 63, Purchased from Cooke in 1883, Along with Nine Others (Nos. 59-68)

most anyone knows, you can't set brakes in that position.

One dark and dreary night we had a double-header and 60 cars. It was snowing and blowing terribly. Then our air failed. Our hand lanterns went out, so we frantically held on to the running board and prayed. In this way we went about five miles, until the top of the front engine struck the overhanging limbs of a large tree which took the big diamond stacks off both engines.

Luckily we hit a reverse curve in the

valley of the Platte River. This and the deep drifts of snow checked our speed and finally stopped us altogether. We were within a mile of Como, the division point. Believe it or not, even in that cold and snow there were 43 hot boxes blazing when we stopped!

On the division south from Como, past Buena Vista, was the wonderful Alpine Tunnel, 2,000 feet long and almost 12,000 feet above sea level. While building it 48 men lost their lives in a dynamite explosion. Through it the South Park crossed the Rockies at the highest elevation of any road in North America.

One day we were going west through the tunnel with a train of 12 cars and caboose. Conductor Fleming was riding the head engine (we had a doubleheader, as usual), and the hind brakeman was riding the caboose. We were making about 15 miles per hour.

Now, like almost all tunnels, the Alpine Tunnel was higher in the middle than at either end. Thus the track was always kept dry. But this time the west approach of the tunnel had caved in and completely blocked its mouth. Water seeping through the walls had backed up in the west end until it almost reached the center.

Well, sir, we sailed into the east portal of that tunnel, and up the grade. Before either of the engineers could stop the train it shot over the hump and plowed into five feet of water. The crews tried to get away, but were overcome by the gas, steam and smoke. Only the hind brakeman and myself escaped. We walked back to a station called Romley and notified the dispatcher.

Yes, the Alpine Mountain was a humdinger. Just a mile west of the tunnel, on another occasion, a snowslide completely buried 14 section men as they were about to retire for the night. It carried houses and shacks away as though they were matches. Only one man lived to tell about it. It took a rescue party nine days to reach him, and he was discovered under a blown-off roof, where he had managed to keep alive by eating snow and chewing tobacco.

NOT long after this another queer wreck took place about three miles south of Buena Vista, on what was known as Dead Man's Curve. Conductor Carrigan had charge of the train, which consisted of two engines and seven cars. He and the head brakeman were riding the head engine.

The vacuum brakes were working well, but in going around the short curves the coupling pin between the second engine and the head car jogged out, and the air hose broke. Since at first the engines were running a trifle faster than the cars, the head end crews did not realize their fix until the cars caught up with the engines and gave them a jar.

The head engineer decided to run away from the cars, but he went so fast that he jumped the track. The second engine followed suit. By this time the train caught up with the wrecked engines and ran into them. Then came a terrific crash, and an ear-shattering explosion. There had been a car of dynamite in the train, but now neither cars, dynamite, engine or crews were left.

All except the rear brakeman and a car of hay were blown up. He was sleeping on the car of hay when the first bump woke him up. Quickly he sized things up, and even more quickly he climbed down and pulled the pin. He was able to stop his car, which happened to be the last one, since there was

Back in 1889 the South Park Was Famous for Some of the Grandest Scenery in the World. Here the Rails Wind Through Chalk Creek Canyon, a Dozen Miles East of Alpine Tunnel. This Piece of Track Was Abandoned Many Years Ago

no caboose, and he walked back into Buena Vista to report the accident. Then he was seen no more. Evidently he was getting a little tired of railroading on this narrow gage line!

We had all kinds of men back on the D. S. P. & P. Some good, some bad. Let me tell you that most of them knew how to railroad. We had good train dispatchers in those days, but all of them weren't on the South Park. A young gentleman by the name of Heard, for example, who had married the general roadmaster's daughter. Heard craved promotion, and in this craving he was sustained by General Superintendent C. W. Fisher.

First of all, Heard wanted to be a train dispatcher. However, Fisher advised him to get a job as brakeman and learn the hills, grades and capacity of engines. So old John McCormack, the trainmaster, lined him up for a run with Conductor "Dad" Hinkle, who hailed from the Detroit & Lansing. Dad was crabby and all business.

They made a round trip to Leadville, and when they got back Hinkle was fit to be tied. He asked Mac where in the hell he had picked up that "hayburner," and told him that if he went out again on his run he would make a whistling post out of Heard.

McCormack tried him out with several other conductors, and they all reported him as no good. These recommendations had no effect. He was turned over to Fisher, who set him up as third trick train dispatcher at Buena Vista. This job was the heaviest of them all. It called for first-class talent, as the South Park used the Denver & Rio Grande tracks for 37 miles between Buena Vista and Leadville. This was before it built its own line to Leadville from Como.

Well, Mr. Heard thought he had

talent, and he started out with all the confidence in the world. To begin with, he had three trains meet on a 30-car spur at Malta, where there already was a work train waiting for orders. This was just a starter. By the time morning came he had everything tied up so tight that it took the day dispatcher three hours to untangle them.

Heard knew when he had enough. He raved and fumed and threw away his office key. Notwithstanding his influence he never came back. I never knew what became of him, until years later I met him waiting on the table in the dining room at Del Rio, Texas, on the S. P.

It's a small world, brothers. Things are always changing. Once the Denver, South Park & Pacific was queen of the narrow gage railroads of the world. Then business fell off, and the whole line from Como to Gunnison, through Buena Vista and the Alpine Tunnel was given up, although the D. & R. G. W. still continues to operate it between Gunnison and Pitkin. And even as I write the Colorado & Southern is preparing to abandon its branch from Denver to Leadville, which used to be the great main line of the old South Park.

Engine on a Joy Ride

By ROCKWOOD T. ROBERTS

WHEN I was working as a machinist helper in the Boston & Albany roundhouse at Worcester, Mass., 'way back in 1912, the power was nowhere near as large as it is today. The freight engines were all Consolidation or 2-8-0 type, with Johnson bars for reverse levers.

One of these mills had been tied up in the house for a water test, and of course after the test the throttle had to be removed, as well as the standpipe in the dome, in order that the boilermaker could get inside to examine the interior of the boiler. A machinist by the name of Paine was given the job of taking out the pipe.

He called his helper, a big redheaded Irishman, who was as green as grass, but willing to do all he could. The standpipe was removed, and after the inspection the two got things ready to put back. Now, the bottom of the pipe has a ring joint that must be ground in, so the helper got oil and emery and went to work.

Sitting on top of the flues was not very comfortable. This bird decided to make a cushion. He got a lot of bagging and some waste and put them over the flues. He sat down and ground away.

When the Irishman finished he put the throttle pipe back and tightened it, and then put the dome cap on. The engine was fired up.

After the engine had steam it was learned that the slack between the engine and tender was reported to be taken up. Regan, the machinist I was helping, was given the job.

We found it necessary to measure the slack and take the drawbar out, heat it in the forge and shorten it. In order to do this we had to knock out the drawbar pins and run the engine ahead a few yards. The boiler was full of water, the fire covered over, the hoses between engine and tender parted and everything O. K. Of course, with the hoses split there was no air. But the hostler who was to move the engine relied on the lever for stopping and we helped him with blocks of wood.

Well, the hostler got up on the engine and at the word started ahead. The old jack was a bit logy, so the hostler opened the throttle wide. When he had gone ahead sufficiently to allow us to work between the engine and tender he closed the throttle. But, lo and behold, she did not respond.

"I can't shut her off!" the hostler shouted. "Get the table."

Regan was an old machinist and thoroughly experienced at the game. He knew what was wrong immediately. Rushing out of the house he called frantically to the turntable man. The engine came rushing for the turntable pit. But as she reached the edge the hostler threw over the lever and she headed back toward the house.

Just when she was about to give her tender a wallop the hostler threw her over again and she headed for the turntable. And again, just as she was about to topple into the pit the lever went over. Back into the house rushed the old girl.

But, as before, she did not strike the tank, for the hostler threw the lever again. When she headed for the pit the

third time the table was lined up. The engine shot out onto it.

She was a funny sight. No tender and the poor hostler sitting high in the cab. In and out he went, throwing the lever over each time just as the damage seemed about to be done.

He could do little else. If only the tank had been connected he could have put on the injector and killed the old girl. Each time he went back and forth it seemed the engine was gaining in speed. She seemed to be loosening up as she traveled.

The foreman came running out of his office when he had heard the racket, but he was helpless to act. He merely stood watching it all, closing his eyes every time the engine came near the end of the table or the tank.

But Regan knew exactly how to stop the whole affair. Disappearing after seeing the table lined up, he soon came running back with a large No. 5 alligator wrench in his hands. At the first opportunity he climbed to the front end of the engine and up onto the steam chest.

It had one of the old fashioned relief valves screwed into it. As the engine shot in and out of the house Regan screwed away on this valve. Just as she was headed into the house for the last time the valve blew out. There was a terrible roaring as the steam shot high into the air, where it now rushed instead of going into the cylinders. Almost immediately the old girl stopped.

When we took off the dome cap to see what was wrong with the throttle we found in it bagging and waste which the red-headed helper had forgotten to remove. It was firmly imbedded under the seat of the throttle and wouldn't allow it to set back in place. Thus it was impossible to shut off the steam.

Doodlebug Transportation

By W. E. BEATTY

THREE things happened on Christmas Eve, 1913: It rained, it snowed, and "doodlebug transportation" was inaugurated on the Webber's Falls, Stigler & Warner Railway in Oklahoma. That is to say, probably for the first time in history gasoline motor cars were used exclusively in the operation of a standard-gage railroad.

For about two years prior to that time I had been employed on the Midland Valley in various capacities, such as building fences and bridges, firing a steam shovel, and station service. On December 23, 1913, I was laid off, although I had planned to get married Christmas Day.

The W. F. S. & W. was then two years old. It had been built by farmers and business men, from Webber's Falls, on the Arkansas River, to Warner, 10.4 miles away. The general manager was a grocer and the president was a farmer, both at Webber's Falls. The only experienced "rails" on that pike were the hogger and the "brains." The fireman and brakemen were mostly cotton pickers.

At one time they had a little stock rush for about three days, and borrowed an engine from the M. V., so as to run two trains. They made a con-

ductor out of a "soda jerker" who had no experience at all in the train service. I know this to be a fact. I had been acquainted with the fellow for several years, and his total experience consisted of being a bellhop in a hotel and presiding at a soda fountain. But he was related to the G. M.

In building this road they had bought from a junk dealer in Texas all of the rails, some ties, and all rolling stock.

The latter consisted of one old engine, flat car, box car, coal car, tank car, and combination coach. For this junk they gave a mortgage on the road as security.

After they had been in operation for a year or so one of Uncle Sam's heartless inspectors dropped in on them for a "look see" at their one and only locomotive. This he promptly condemned as unfit for passenger service.

As the road was then under $17,000 mortgage, which was real money to those farmers, the question of buying a locomotive that would stand inspection "had them on the ground." As a result they suspended service in May, 1913, with no hope of ever being able to resume.

As I have mentioned, I was out of a job, effective December 23rd. On that date M. J. Maples and I got permission to run a motor car on the S. F. S. & W. rails.

Maples had a contract for carrying U. S. mails between Warner and Webber's Falls, and was using "Old Dobbin" for that purpose.

I bought a 3½ horsepower section car, secondhand, from an extra gang foreman on the M. V., and thus Maples and I became the operators of a railroad.

Service was begun December 24th at 5.30 P.M., but the first round trip was not completed until 8.30 the next morning, because of snow. Our car was belt-driven; everybody knows how a leather belt will slip when wet. We were tied up on the main line about three miles out from Warner and stayed all night at a farmhouse.

Awaking at 9 A.M. with the belt dried out, and some hot coffee to fortify the inner man, we were ready to go again.

We arrived at Webber's Falls at 8.30 A.M., too late for me to return to Warner to catch the Midland Valley train to Stigler for my own wedding. As a consequence, there was a wedding dinner set but no marriage.

I wired the little lady. Then, after thinking it over, I decided the op at Stigler might be celebrating Christmas, so I told her the sad news on long distance phone.

The wedding ceremony was postponed until the 28th, at 10.30 A.M., and went through on scheduled time. At 11.45 we left for Warner to eat a belated wedding dinner.

But, marriage or no marriage, the railroad had to run. Maples and I in the motor vehicle left Warner at 2.00 P.M. for Webber's Falls, and at 5.30 P.M. our first successful round trip was started.

For the first few days the secondhand section car was our total power, but we soon bought a new four cylinder 14-horse power car capable of making forty miles per hour. Unfortunately, we had to push this car down the track to start the engine. You should have seen passengers pushing that car, and then climbing on.

For rolling stock we had two "flats," push cars, which we used for handling freight.

There was a lot of miscellaneous freight for Webber's Falls, for which

we had a rate of fifteen cents per cwt., store-to-door delivery. I believe this was the first service of its kind rendered to patrons by any railroad in the country.

The small motor car comfortably handled six or seven passengers, and the large one fourteen. Sometimes we had to run in two sections. The fare for adults was fifty cents. Children paid according to age. Trunks cost fifty cents each. We would make a special trip for three adult fares, $1.50, but if there were more than three passengers each paid the regular fare.

Only once did we have to use the "big hook." We were going from Webber's Falls to Warner with all rolling stock, after freight. We were stepping along at about thirty-five per when the large motor, which was in front, apparently decided to go back to Webber's Falls.

The thing started back, but the rails didn't make that much of a curve, and we wound up in the ditch. However, the large motor was the only one damaged. We loaded it on a flat car and took it in to the blacksmith shop, where both axles were straightened and the vehicle was as good as new again.

But all things must end, and our operation of the W. F. S. & W. soon came to a close.

Early in February, 1914, the original builders of the road served notice on us to discontinue using the W. F. S. & W. rails for hauling passengers and freight. As we had no written contract we had to quit.

This action came because we had developed a paying business, and those people couldn't stand to see us making from $15 to $25 per day.

Well, they got the road back, but soon made a mess of the whole works. They bought an old automobile, second-hand, and equipped it with flanged wheels to fit the rails. Then they went to Muskogee and purchased an old discarded four-wheel street car, in which they installed an old auto engine for power.

Besides, they repaired the old locomotive for handling carload business. Yes, and hired another bunch of cotton pickers and farm hands to run the layout.

The last time I was through Warner, while they were operating, the locomotive was standing at the depot, with a hole blown out of the top of the boiler. The automobile and the street car were there also, both dead. They couldn't turn a wheel.

I don't know how long after this they continued to operate, as I left that part of the country. The next time I went through there the rails and equipment had been torn out and sent to France, along with the old Colorado Midland, to help in the war.

We had one big advantage in operating the W. F. S. & W.: we were not cursed with the competition of busses and trucks that are the bane of our railroads today. Every time I meet one of these road hogs I see red—and it isn't a stop signal either.

But during the years of 1913 and 1914, you wouldn't have been bothered with them between Warner and Webber's Falls, as there were no roads that were worthy of the name.

Several times within the past few years I have driven through that part of the country on a good highway that follows or parallels our old roadbed, and always memories haunt me of the trials and tribulations of maintaining "doodlebug transportation on the famous Webber's Falls, Stigler and Warner Railway."

A Guardian Angel on the Crummy

By W. J. COTTER

IT was the summer of 1917. Due to the World War things were humming on the railroads of this country. The Delaware & Hudson was no exception. Trains were running as close together as rules would allow.

One night my crew—I was braking at the time—was marked north out of Oneonta, N. Y., about 10 P.M. We drew an 87-car train, mostly box cars loaded with merchandise. We were doubleheading, but the road was so hard up for help that an extra engineer was assigned to the head engine, and therefore was handling the air.

From East Worcester to Cobleskill there are 10 miles of steep descending grade. Trains came to a full stop before going down. It was always necessary for us to set up all the retaining valves and to ride the train down the hill expecting trouble at any moment.

This night, as usual, we stopped at the summit. While the engineer was pumping up his train line again, I dropped off the caboose and made my way along the southbound track to the middle of the train. This was a habit of mine, as I could make an inspection of brake rigging and at the same time get to the middle of the train and thus set up the retainers before we broke over the hill.

At West Richmondville, which was about one mile down the grade, our engineer applied the brakes, as usual. The train slowed up considerably, but after a few hundred yards it seemed to be regaining its speed. At this point I could see the block signal, which read caution. Then came another application of air. It didn't seem to faze our speed at all! And still another. I looked at my watch and figured that No. 12 south from Albany was due at Richmondville, which was dead ahead.

At the way we were rolling I figured our engineer would have to be an artist to make a stop in case No. 12 should be at Richmondville Depot. Just then I got a peep at the next block ahead. It was still caution.

Becoming alarmed, although our hogger never blew for brakes all this time, I made my way back over the few cars that separated me from the caboose. I rapped on the roof with the brake club. The conductor yelled:

"Set up those hand brakes as fast as you can. We have only ten pounds of air on the gage back here." At that he climbed up on the last car.

I saw he had a brake club, so I made my way farther ahead, where I could be of more use. The noise of an engine attracted my attention. I looked up and saw we were just passing between Richmondville depot and No. 12, which was standing on the southbound track.

Still, for some unknown reason, our engineer had not signaled for brakes. I started winding up brakes about 20 cars ahead of the caboose, working toward the engine all the time. Then for the third time I got a glimpse of the block ahead. Again it was caution. I came to the conclusion that a train was dropping down the hill ahead of us and that it was going as fast as we.

About three miles below Richmondville depot there is a "sag"—a long depression in the right-of-way. As

soon as the engines hit the uphill side of the sag, we dragged to a nice stop.

Up to this time we had not received one warning whistle from the hogger. We had been drifting down that grade just as if we didn't have an engine.

While I started knocking off the handbrakes the conductor went ahead to put the engineer on the spot. Finally we proceeded down to Cherry Valley Jct., about a half mile ahead. I came ahead over the train wondering what all the mystery was about.

When we pulled down to the tower I could see the two red lights which told that a caboose was just ahead. By that time the hogger and conductor had settled their differences. I was instructed to switch engines around, that is, to put the second engine in front, as the extra engineer was not capable of running the hills. While we were waiting for a clear track I walked ahead to chin with the flagman of the train that was holding us up.

My heart almost stopped when I found what might have happened. The flagman said he was on top of the caboose on account of a hot box. He said:

"The darn fool engineer! Running wild! He never looked back even once. I wish they would make those hoggers ride backwards down those hills so they could see the hind end."

I don't know if they ever made a rule like that or not. If they have I'm certainly glad it wasn't in effect that night. I hate to think of what might have happened if that hogger had stopped at Richmondville with us coming along not able to stop, and No. 12 standing on the other track.

The Boomers' Corner

YEARS ago, while I was working out of Ashland, Ore., on the Southern Pacific, some engines were equipped with a mechanical device known as the "Sweeny," which was used when the air failed on a down grade. Does any old-timer remember this contraption? Is it used today?

Engineer James F. McCarr (Sept. issue) mentions the use of a hand brake on an engine tank to help stop the engine while switching. This reminds me of old times on the "Q" when the fireboy did the trick, unless he could get one of the idle boys about town to handle the brakes for him. McCarr uses the term "spider," which I had not heard in some time. If I am not mistaken, the "Q" engines of long ago had what was called a spider in their pony truck frames.

Let's have more juice news. I can't see why some readers think your magazine will become a "sissy" sheet if forms of power and transportation other than steam are written up.—JOHN J. MCNAMARA, 242 Griffith St., Jackson, Miss.

* * *

What became of "Erny" Russell, who was fireman on the First District of the U. P.? He was one of the best firemen on the district in 1916, before being made hogger. Erny was taken out of service, then reinstated, but refused to return to work.—"EATUM UP JACK," U. P. exhogger, General Delivery, Council Bluffs, Ia.

* * *

At 15 I began a hobo career which took me through every state in the Union, every province of Canada, also Newfoundland, Nova Scotia, Alaska and Mexico. Have had jobs on many pikes—call boy, oiler, gandy dancer, beanery clerk, machinist's helper in repair shops, etc.

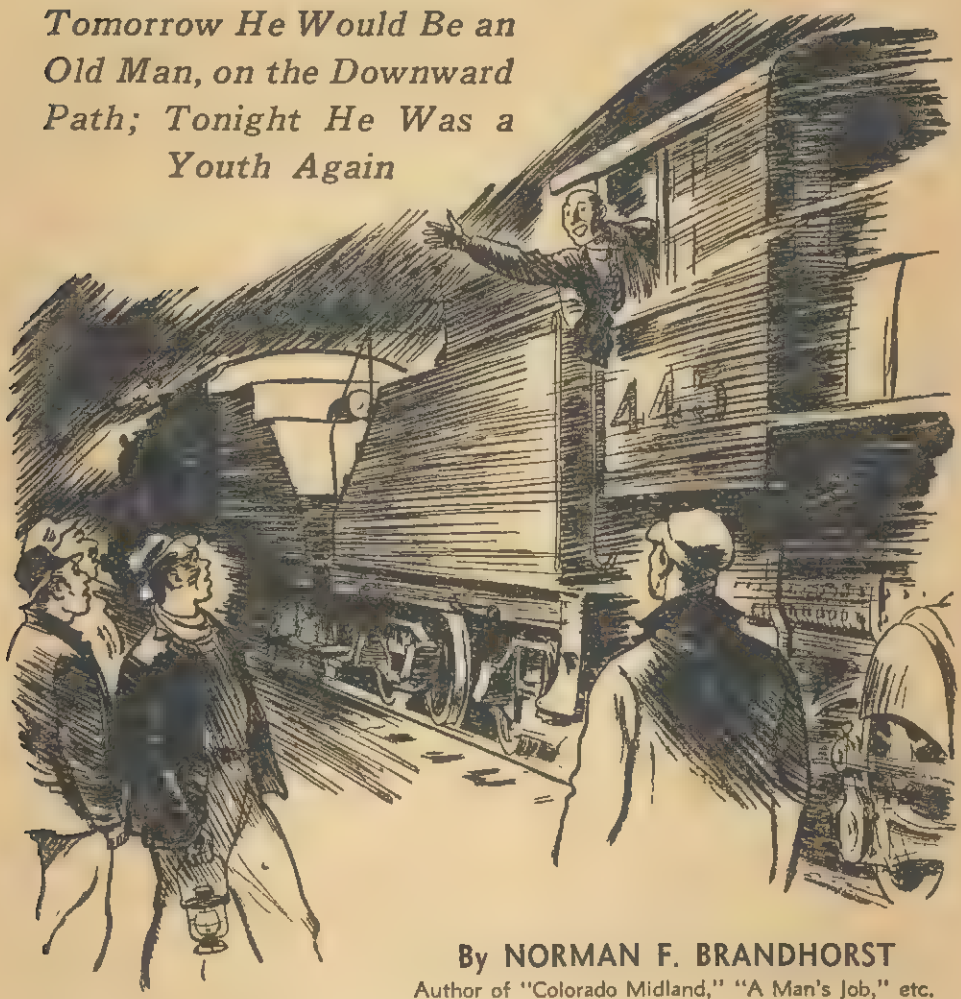
Print more pictures of wrecks, engines, and odd railroad scenes. Sidetrack the murder and gangster stuff. I would like to hear from secretaries of railroad clubs.—B. LEVINE, 203 W. 98th St., Apt 5-E, New York City.

* * *

C. J. Wilson, of Peoria, Ill., challenges anyone to tie or beat his record for a long ride on the "Panama Limited" from New Orleans to Centralia, Ill., 650 miles. As I understand it, he means "blinding." In 1928 I made this trip with my buddy, Johnny Gundlach, 1534 University Ave., Madison. We rode the blind of the "Panama Limited" from the 63rd St. station of the I. C. at Centralia to Carrolltown Ave. station, New Orleans. It took us from 12.30 noon to 9.30 A.M. the next day—about 925 miles, all on the same train.—H. J. KAISER, 10 N. Charter St., Madison, Wis.

Boomer Jim's Last Run

Tomorrow He Would Be an Old Man, on the Downward Path; Tonight He Was a Youth Again



By NORMAN F. BRANDHORST

Author of "Colorado Midland," "A Man's Job," etc.

NOBODY knew where old Jim Snow had come from. Not that he didn't talk about himself. Jim was always talking, telling of the days when "railroadin' was railroadin'." He lived in the past, but it was a past which had been continually changing; there had always been a better job just around the curve.

"That guy's downright crazy," said Phil Ross, one of the hostler helpers. "To hear him chew the rag, you'd think he worked on fifty railroads. Chances are he ain't worked on five."

That just about expressed the opinion of everyone in the Hampton roundhouse. Jim Snow had been running the turntable on the graveyard trick for more than six years now; and since most of the younger fellows had hired out after that, he was regarded as a

permanent fixture—a little batty, prone to exaggeration, but harmless enough.

The ex-boomer could have had a day job, but preferred to work from eleven at night to seven in the morning. There weren't as many engines passing over the table on the night shift. That gave him more time to amble down to the sandhouse and spin his tales.

Besides, the yards were more alluring at night. Switch lights twinkling in the dark, the broad swath cut through the blackness by a headlight, the hum of dynamos on the engines—all reminded him of the days when Life still lay before him. A railroad yard in the daytime was pleasant, but a railroad yard at night fired his imagination and thrilled his senses.

He had been a king of boomers, he informed the boys in the sandhouse; there wasn't a man-sized wreck in railroad history that Jim Snow wasn't in, or didn't know a lot about.

"Why, you old warhorse!" Hostler Joe Guggins challenged with a grin and a wink, one night during a sandhouse session. "I'll bet my twenty-one jooled turnip that you're nothin' but a home guard who got fired for incompetence and picked up a job here so's he could string us along."

Boomer Jim's lips curled at that, while his Adam's apple bobbed up and down like a cork on a fish line.

"Home guard, eh? Incomp'tence, eh?" he retorted. "Why, I forgot more about railroadin' afore I was twenty-one than you'll ever know in all your life!"

The group was now roaring with laughter.

"Tell us about the wreck of old Sixty-five, Jim," begged one of the helpers. "Wasn't that where you saved the president's special?"

"No! No!" shouted another. "What about the time you stuck to the runaway train and piloted her down a six per cent grade all by yourself?"

"Why, that ain't nothin' a-tall," interjected a third. "Let Jim get started on how he told the general manager and president to go to hell personally, and how they thought he was such a good man that they kept him on, anyhow!"

Peals of mirth greeted these sallies. Boomer Jim rose, his lips twitching convulsively. Without a word he stomped to the door. There he turned and shook a long bony finger at the gathering.

"You fools don't appreciate a good true story when you hear it," he yelled. "Well, I'll stay away an' let you rot in your tracks afore I'll lift a hand to help you."

BUT if Jim was easy to anger, he was also quick to forget. The next night, as usual, he turned up in the sandhouse during the supper hour. And he brought with him a brand new yarn of his younger days. Although he was easy-going and happy, Boomer Jim still retained some of his old fire. He almost despised himself for growing old, for "gettin' into a rut" on the turntable job.

Jim's work was simple. After the fire had been knocked out of an incoming engine, he lined up the electrically-driven turntable for her track. As soon as the iron horse was balanced on the center of the structure, he lined her up for an empty stall in the roundhouse. Then the hostler and his helper put the engine away until she would be fired up for another trip. The exact opposite procedure was necessary when an engine came out of the house.

All that Jim had to do was to move

the control lever in the snug four by five-foot shack on the end of the table. It was easy. The shack was always warm in winter, always comfortable.

"I'm gettin' old," he said once. "That job is made to order for somebody with one foot in the grave."

One night Phil Ross yelled to him from Stall 10.

Boomer Jim looked up, peered through the sliding glass windows of the shack, and saw the tail light of the 809 glowing red. Down below it was a yellow, dancing blob of light—Phil's lantern.

As usual, No. 65's engine was ready to come out of the house. Jim pushed the controller ahead a few notches, spun the wheels of the heavy turntable, and finally ran it to Stall 10, with whose rails he carefully lined those of the table.

With a great hissing of steam the massive engine slowly backed out of the roundhouse. She was shooting black water and blacker smoke from her smokestack, and wet, hot vapor from her cylinder cocks. Phil Ross was standing across from Jim, his lantern held out at arm's length and describing slow circles—the back-up signal to Guggins, his hostler.

"She's workin' hard," Phil remarked. "Joe is havin' trouble releasin' the brakes."

Boomer Jim nodded.

As if to verify Phil's statement, the 809 came to an abrupt stop with her tender a half dozen feet from the table. The helper walked back to the cab, while Jim sat down and waited.

For ten minutes the 809 stood there, her tender almost on the turntable and her smokestack flooding the roundhouse with a black cloud, while the hostler and a machinist worked on the brakes. Every so often Jim could hear a hiss as the hostler released the air, and then the rapid pulse of the pumps as he "set 'em up" again.

Meantime another outgoing engine was ready in Stall 25, and another hostler had gone down to get her. Again came the shout of an impatient helper:

"Oh, Jim! Hey, Jim!"

Grumbling a bit, the old fellow turned toward the voice. Once more he saw the gleam of a lantern and the scarlet glow of the tail light on the 900, which was ordered out for Train No. 11.

Almost instinctively Jim grabbed for the control lever. He checked himself as he heard the whine of released air on the 809.

For almost a minute he watched and waited. Nothing happened. The ex-boomer glanced up the left side of the locomotive and noticed the rays of a torch shining through the wheel spokes from the other side of the engine. Evidently they were still working on the brakes.

He grasped the control lever and advanced it. The motor hummed, the table began to revolve. And then, in the twinkling of an eye, it happened!

With a series of wet booms from her stack, and sharp, angry hisses from her cylinder cocks, the 809 shot backward toward the table. Because his brakes were still sticking, Guggins had opened the throttle wide. *Without warning, the engine was rushing into the open turntable pit!*

HORROR-STRICKEN, Jim reversed the electric motor and tried to run it back before the 809's tender reached the edge.

The distance and time were too short. There was a hoarse shout from the hostler, the abrupt "hossing" over of

the reverse lever, but they were too late.

The 809's rear tender truck shot out into space, while the body of the tank dropped to the rails with a mighty crash. Although the driver brakes were applied and the engine stopped abruptly, the damage was thorough and complete. The whole tender might just as well have fallen into the turntable pit.

It was a job for the Big Hook. To make matters worse, the roundhouse was so arranged that it was impossible to move a single available engine out of it. Everything was tied up. Nos. 11 and 65 would be late, to say nothing of the trains due in a few hours.

As Jim struggled with the heavy blocks and tackle, while helping to clear the turntable pit, he realized he would probably be held to account for the accident. The hostler should not have moved the engine without the proper signal from his helper, but Jim knew that *he* should not have moved the turntable away from an engine so close to it unless the crew had told him to. All officialdom would be demanding blood, and he would be the one to pay. He had been around railroads too long to hope otherwise.

He felt even gloomier when morning came and the mess was still blocking the movement of engines. They had turned around a couple of incoming locomotives on the wye and had used them for Nos. 11 and 65. Nevertheless both trains were two hours late, and one of the early morning eastbound freights had to be cancelled and ordered five hours behind schedule.

When Boomer Jim came to work that night there was a sealed envelope waiting for him. The contents were brief and to the point.

Please report in my office for investigation Thursday, Oct. 25, at 8 a.m.
GRANT WESTON,
Roundhouse Foreman.

Jim crushed up the message and threw it in his pot-bellied stove. The devil with 'em! He'd been kicked off worse roads than this, and he'd quit some that were a damn sight better. He was a boomer. He was independent.

But then came the realization that he was an old man; most boomers were young men, and his meal-ticket depended upon his job. He wouldn't be able to get another on a railroad, or any other place. Besides, the railroad was the place for him. The rhythm of moving trains was in his blood and always would be.

Thus, for the first time in his life Boomer Jim was worried about his job. Think of it, he muttered to himself, Jim Snow worried about his job! Until now it *had* been unthinkable, but today it was a cold fact. He had never looked at it that way before.

He walked over to the sandhouse during the supper period and joined the hostling crews.

"Well, well, well!" saluted young Ross. "If it ain't old Jim, the only white man in captivity who can claim the honor of makin' a flyin' switch into a turntable pit."

Jim winced. He was thinking of that letter. To the chorus of jeers and laughs prompted by this remark he answered with silence.

The ex-boomer sat down, pulled out his pipe, and disregarded everyone. For a long time he gazed meditatively at the floor. This was the first time in his life he had felt as though he were licked, as though he didn't have a friend to his name.

When finally the "rag-chewin'" of

the hostling crews turned to other matters, Jim was still silent. Then somebody mentioned that he had read in the newspapers an article about a snowstorm in the Colorado Rockies. The effect on Boomer Jim was miraculous. He sat up, cocked his head, and forgot his troubles. His eyes sparkled, his lips twitched impatiently. He had a story to tell about that state as it used to be.

"That's a great country," he interrupted eagerly. "Why, I spent some of the happiest days of my life there."

And then, oblivious to the winks and smiles on the faces of his auditors, the old man launched into a detailed narration. Memories were all he had left, and he was happy only when he was with them.

"Yes, sir," he affirmed, "I'll never forget the time I was brakin' for the D. & R. G. north uh Salida. That was the day we started up Leadville way, through the Tennessee Pass, with thutty cars an' nothin' but hand brakes. Well, sir, I am right here to tell you I ain't never seen nothin' like it. We started out—"

And so old Jim commenced one of his long stories. Again he lived in the past, when the cards had been stacked in his favor, and fortune had smiled on him.

BUT now the hour of reckoning was close at hand. It wasn't long afterward that old Jim Snow was sitting in front of Weston, the roundhouse foreman. Joe Guggins and Phil Ross also were there.

The former testified that although it was not his intention to back on the turntable when the accident occurred, the throttle had been cracked, and when he threw back the reverse lever, the partially inoperative brakes did not hold. This was true. Phil Ross verified it. Both men would have willingly lied to protect Jim, but there was no other possible story to be told.

"You should have been more careful, anyway," was the foreman's dry comment. "Some of you hostlers seem to think you're running the Twentieth Century Limited."

Then he turned to the culprit. There was pity in his glance, and Jim could see it. The ex-boomer winced. He didn't mind taking the blame, but he hated to be the object of pity.

"Now, Jim," Weston said. "I want to hear your statement again."

Again the turntable operator rehearsed his story. "An' when I heard the air I waited for a minute, even though they was callin' me from Stall Twenty-five. But when the 809 stayed there I come to the conclusion that they was still workin' on her, so I started to move the table around to the other engine."

The foreman shook his head. "I can see your point, Jim, and I hate to do it. I wish there was some way out for you, but the best I can do is thirty days. Even at that I'll have to do some tall explaining. I'm sorry."

Jim sat in a daze. He was glad, and yet despised himself for falling so low. It hurt that he lived to see the day when he felt like thanking a roundhouse foreman for thirty days' suspension.

Thirty days was a long time for Boomer Jim. Never before in his erratic and varied career had he been away from the roaring road that long. There were times when he had been without a job for two months, but during those periods he had always been riding the trains, looking for the better job that always lay just around the curve.

He couldn't sleep nights, and he couldn't stay awake days. Six years on the graveyard trick had set him in his ways.

The first night Jim sought solace in a new-fangled movie, but it disgusted him. He had seen more of Life than any movie could show.

The second night he went out for a walk, but wherever he went he found himself heading for the railroad yard. That decided him.

The third night, and every night thereafter, found him leaving his dingy rooming house at 10 P.M. Then he would walk down to the bank overlooking the Hampton terminal. There he would sit and watch the movements of the locomotives and trains until almost morning.

When it rained he would retreat to the protection of an abandoned switch shanty at the lower end of the yard, from which vantage point he was able to watch both the roundhouse and yard crews at work.

Every time an engine snorted, every time a car was shunted, every time a switch light changed its color, his mind went back to the days when he was young. Thus he would sit and dream.

About three in the morning he would wander over to the "Greasy Spoon" where a number of road men and night shift roundhouse workers ate.

"Hullo, Jim," one of the boys would say. "Been out hell-raisin'?"

Old Jim would smile wanly. "Yeh. Sure. I ain't had much chance for night life before, so I'm makin' the best of my thirty days."

With that he would utter a forced laugh, and the boys would laugh with him.

Then he'd get busy with a story of his younger days. He'd purposely string it out so that he'd have an excuse to walk back into the terminal or yards with the fellow to whom he was talking. In this way it was almost daylight by the time he trudged up the hill to his rooming house.

TWO weeks passed. The night of the fifteenth day Jim walked down to the yard around eleven o'clock as usual. All day it had been cloudy, and now a slight drizzle had begun. It was one of those chilly, steady fall rains, good for all night and perhaps most of the next day.

As Jim pulled his coat collar up around his neck he forgot this rain. It reminded him of the wet season in California, when he'd worked for the "Espee" years ago. Almost unconsciously he crossed the two main line tracks and headed for the old deserted shanty. It would be dry and comfortable there.

Now, the Hampton yard was laid out in the shape of a huge "V." The roundhouse and engine terminal was situated on one leg of the letter, and the yard and offices on the other. Tracks from each one branched into the main line at the point of the "V," and it was near here that the old shanty was located.

For two hours Jim sat in it and smoked, sometimes dozing, sometimes watching the goings-on in the yard with all the concern of a night yardmaster. He knew the routine of the terminal so well that he was able to identify every engine and train that entered or left.

Over to the right, on one of the tracks leading from the roundhouse, he could see the long line of switch engines marked up for work in the morning. Their pumps were turned off, their dynamos silent. Except for

the wraith-like clouds of steam which hung over them, they were still and deserted.

Rain was falling a little harder now, and the lights in the yard became blurred. Jim yawned, refilled his pipe, and leaned back against the wall. It was comfortable in here. His eyelids drooped.

He was awakened by a clanking noise, not loud and harsh, but soft and steady. Returning consciousness told him it was the sound of side rods on a slowly moving locomotive. Somebody was fooling with one of the morning switchers, no doubt.

Jim closed his eyes again, but a vague knowledge troubled him. He struggled to keep awake, for he told himself that something was wrong.

He sat up and peered through the doorway. He still heard the rhythmical clanking, but it was coming faster now. The engine was picking up speed. Then, like a wave of cold water, realization broke over him: *there were no pumps working, no dynamo running!* That meant one thing: there was no man aboard the locomotive!

Dashing outside, he saw one of the switch engines from the outgoing track heading onto the main line. And from where he stood he could see that the cab was empty.

He ran after her, knowing instantly, without a moment of wondering, what had happened. Some one, no doubt, had kicked shut the cylinder cocks on one of the switchers. Her lever had been in back motion, and her throttle had been leaky. As soon as enough steam gathered in her pistons, and as soon as her air pressure went down, she had crept silently out of the yard, slowly but surely increasing her pace. And now she was on the westbound main line, headed to almost certain collision!

Before he had gone fifty feet Boomer Jim realized it would be impossible to catch the engine. She was moving faster than he was, and she had a hundred-foot start, to boot.

The old fellow's mind worked swiftly. There was only one thing left to do: get another engine and go after her.

He turned and ran toward the other switchers, which were parked a quarter of a mile away. Panting, wheezing, grunting, he spurred on his spindly legs to their utmost.

Once he fell and slapped his knee cap on a rail. Then he tripped on a tie and landed squarely on his stomach in a puddle of water. White hair streaming in the wind, crooked arms stretched forward, he gained the first engine.

NOT a soul was about. The watchman and hostlers were probably up in the roundhouse. By the time he could get one of them, ten precious minutes would have been lost. The runaway would have met a train. Indeed, an incoming freight was already overdue from the East.

Everything was up to him. And not for a fraction of a second did he hesitate.

What, Boomer Jim Snow, who had run more engines in his day than most of these kids around here put together, afraid to take an old six-wheeled coffee pot on the main without the O. K. of a half dozen two-bit executives? Old Jim actually laughed at the idea.

"I'm a home guard, eh?" he muttered to himself. "Well, I'll show 'em."

He scrambled up in the cab of the "first out" engine, reached for the

"niggerhead" and opened the dynamo and pump valves. The frantic beating of the compressors and the shrill crescendo whine of the generator rewarded him.

Luckily the 445 had a good head of steam and a not too heavy bank in her firebox. It was the work of a moment to rake up the "green" coal and start a roaring fire. Jim felt his spirit expand as he grasped the hard wood handle of the scoop. Why, he was back on the roaring road again, back in the days when he was a young man.

It would be his last run, but what a glorious run! While thoughts raced through his brain, he cackled to himself as he slaved over the fire.

"Incomp'tence, eh? Well, I forgot more about railroadin' afore I was twenty-one than them home guards 'll ever know."

They still talk about Jim's deed on the railroad. How an ancient worn-out boomer, shelved to an old woman's job in the roundhouse, and then suspended for responsibility in a wreck, happened to cover himself with glory.

"Yes, sir," Jim exulted as he opened the throttle and backed up the line. "We'll see what kind uh railroad man I am."

But he had used up priceless moments—moments which gave the runaway a good start. Already he was turning a wheel at a good rate of speed. He flicked on the headlight, blew several blasts on the whistle.

Down the lead track, through the switch, and onto the main line he followed in the tracks of the runaway. Yard crews stopped work, bewildered at the spectacle of a switcher running up the westbound main.

Roundhouse men heard the racket and wondered what was going on. Irate townspeople, aroused from their sleep, cussed the railroad before turning over. But nobody knew that Boomer Jim was making his last run.

At fifty miles an hour he urged the saucer-wheeled yard engine around the long curve. Lucky he was backing up, for the tender acted as a leading truck and kept her from jumping the rails. He opened the throttle to the limit and adjusted the cutoff.

Never before had he run a switch engine so fast. Her exhaust sounded like that of a motor car.

Roaring around the next curve, she caught the shape of the runaway in the gleam of her headlight. Because the track was slightly down-grade here it was traveling at a tremendous rate.

Jim set his teeth as it came slowly within range. He stared ahead, his eyes riveted on the coupling of the runaway. Was it open or was it closed?

There was a chance he could make it if it were closed, he realized, for he had pulled out the knuckle on the 445 before he left. But the chance was slim. They would have to be exactly in line. Jim had railroaded too long to hope that such would be the case.

He sucked in his breath. The coupling was closed! Worse yet, it was swung over to one side, so that he could not hook onto it. But Jim was determined to stop that engine.

"T'ell with her," he spoke through gritted teeth. "I'll straighten her out myself. Old Jim'll show them home guards how much he knows about railroadin'."

HE slowed down the 445 until he reckoned it would creep up on the runaway and yet not hit her too hard. Quickly he jumped to the deck, scrambled over the coal gates and around the pile of coal. Then he clambered down the back end of the tank.

One shaky foot on the drawhead, he let the other down to the footboard.

Now he was within a dozen feet of the runaway, and gaining on her every second. Slowly the two engines drew together. Just before their couplers met old Jim took a deep breath, poised himself and jumped.

One foot caught on the board of the runaway; the other slipped. Jim grabbed wildly for the irons, and with almost superhuman effort pulled himself to safety.

Without stopping to catch his breath, he reached over and pushed the drawbar into place. He jerked up the pin and zipped the knuckle open. He was none too soon. His hand was barely out of the way when the two couplers met with a loud crash. The pins fell with a click; the two locomotives were hooked together.

"Incomp'tence, eh? Home guard, eh?" Jim half shouted. "Well, sir, I forgot more about railroadin' . . ."

The ex-boomer hopped back to the 445, scrambled up the back of her tender with all the ability of a youth, and swung down into the cab. He shut off steam, applied the air, and brought the iron horses to a swift stop.

But how about the westbound manifest? Boomer Jim was on her time, and on her track. He chased back to the cab of the runaway, which was straining against the dead weight of the 445. Shut off her throttle and hossed over the reverse lever. He kicked open her cylinder cocks, and turning on her generator, switched on her headlight. It would be a warning for the freight train. Then he hustled back to the 445.

And now Boomer Jim decided to tell the world about it all. He grabbed the whistle rope and pulled it down. Kept it down for a full half minute. Then he tied the rope onto the cab curtain bracket.

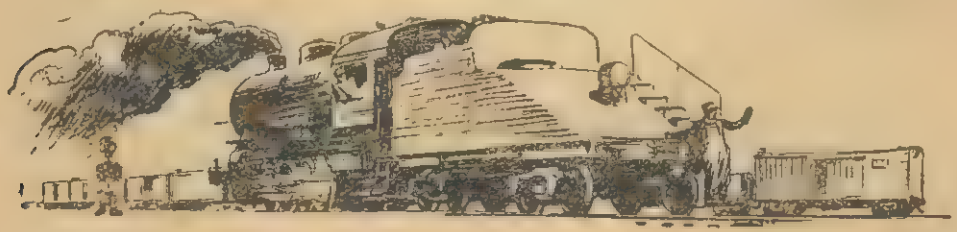
Maybe he was using up good steam. Maybe he was making a hell of a racket. That was all right. He was boss now. He was making his last run, and he was going to celebrate. If Weston didn't like it, that guy knew what he could do. It wasn't everybody who could finish up a long career in the railroad game like this.

Singing, shouting, the old fellow leaned far out of the cab and opened the throttle lever. The 445 leaped ahead, dragging the runaway behind it as a cat drags a mouse. The whistle was still screaming; Jim was still singing.

"Huh!" he broke off. "So I'm a home guard, eh? Well, sir, I wanna tell you that I forgot more about railroadin' afore I was twenty-one than them old maids'll ever know!"

Jim was packing years of experience, years of joy, years of discontent, years of danger into a single short hour. Tomorrow he would be an old man, on the downward path. Tonight he was a youth again.

The bell was ringing joyfully. The whistle was howling to the skies. Old Jim Snow, king of boomers, was rolling down the main on his last run.



Railroad Rimes

HOT SHOT HOGHEAD

WHIPPING a hot shot eastward,
Shimmering rails are a-gleam,
Smokestack barking a lilting tune,
Primed with a full head of steam.
Drivers are whirling below me.
Pop valve is singing above.
Signals blinking a brilliant green.
Oh, this is the life I love!

Tank is half full of water,
Nearly two-thirds full of coal.
Forty-five box cars dangling east;
Boy, does the old Mike roll!
Dispatcher's watching our progress.
Smiles as we burn up the line,
Getting us dope on westbound crews
Who're late on the advertised time.

Talk about office positions!
Hear that old whistle wail!
I wouldn't trade with John D.
Me for the roaring rail.
Give me a wallowing engine,
A night when stars shine above,
Forty-five cars of hot shot freight
And I'm living the life I love.

—O. Earl Lyles

* * *

THE GRAVE OF THE SECTION HAND

THEY laid him away on the brow of the hill,
Outside of the right-of-way,
And the old boss whispered, "Peace, be still!"
Till the call on the Final Day.
They had placed him where he had wished to lie
When his turn would come, he said;
Where he'd list to the wire's mournful sigh,
To the foreman's, "Joint ahead!"

For many a year he had paced the beat;
He had pumped o'er every tie;
And now from his narrow, last retreat,
He could feel the freights roll by;
For from his rest, 'neath the willow's shade,
His spirit would guard the track;
He would know when the engines struck the grade,
Hear the old call: "Center back!"

He would hear the tramp of the "extra crew,"
The alien's clattering tongue,
The voice of the Irish boss he knew,
And the water-boy's whistle and song.
And lonely he'd be when the sun's last glare
Had faded away in the night,
And left him alone with the feeble flare
Of the distant red switch-light.

And the old boss fastened a band of black
To the used handle-bar;
And he said: "Now, men, the speed we'll slack
As we pass with the old hand-car
The place on the brow of the hill beyon';
We will make up the minute we're late,
While the birds are singing their morning song
O'er the grave of our old-time mate."

—Alf. Burrett

* * *

THE NIGHT OPERATOR

IN his little lamp-lit office
Through the gloomy hours of night
Sits the lone night operator
From the eve till morning light,
Watching close with sharpened hearing
What the sleepless sounders say,
Talking with his wakeful neighbors
In the stations far away.

Conversation with his far-off neighbors
Drives the dull night hours along,
While his duties and his orders
All the while his memory throng;
Though his eyelids droop at midnight,
Fain to close themselves in sleep,
Not for him the bliss of slumber,
He must still his vigil keep.

Now I see a scowl of anger
Cloud the operator's brow,
Hear him breaking in his sending,
Wonder what's the matter now.
'Tis some plug that is receiving,
Hear him break and say "GA"
Four or five times in one message,
Ere he deigns to sound "O. K."

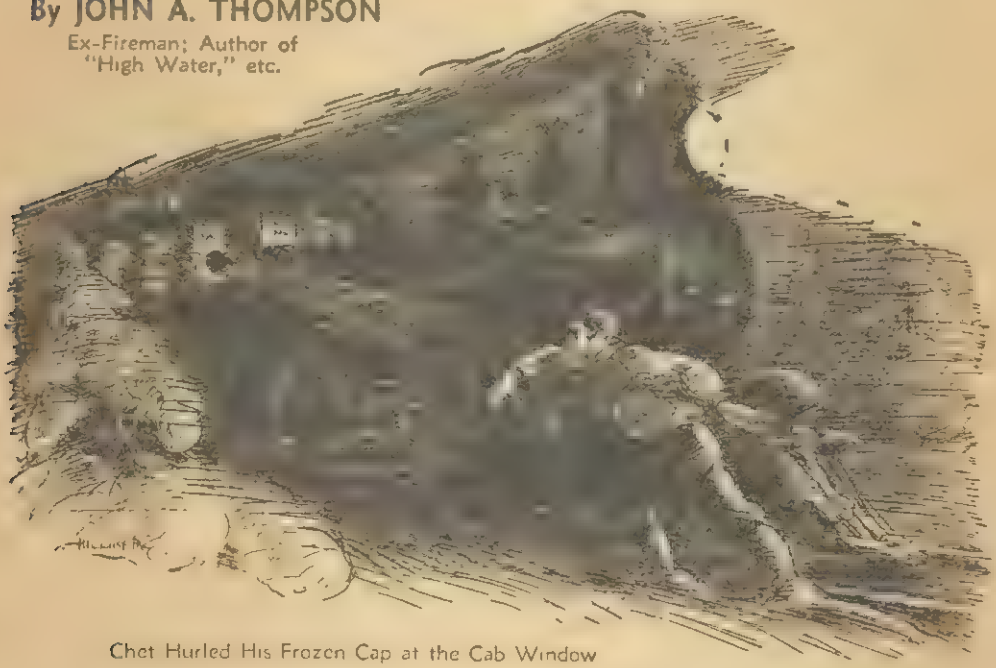
Now his office call is sounded—
How the glistening sounder clicks!
And he catches quick the order:
"Flag and hold train No. 6."
Quickly comes another order
For a freight-car overdue,
And the sounder clicks it fiercely:
"Hurry up the 32."

—J. S. Taylor

The Gold Rush Special

"It's You an' Me Makes the Road Safe for Them Boys to Ride on," Says the Section Boss

By JOHN A. THOMPSON
Ex-Fireman; Author of "High Water," etc.



Chet Hurled His Frozen Cap at the Cab Window

A GRIM Alaskan winter was about to break on the Nome & Kougarok Railroad, which threw its slender lines of steel from the shores of Bering Sea across the Arctic tundra to the distant gold mining camps in Kougarok Valley.

Big Tim Halloran, foreman of the best kept section on the N. & K., stood looking toward the north where ice-capped hills rose to meet a sullen sky.

"Take yer shovels, lads," he said to his gang, "an' dress up the shoulder. It'll be freezin' before mornin'."

Chet Howard, youngest and greenest member of the gang, was working on a small rock that had become mixed with the cinders. He was trying to force it under the tie with the upper end of his bar.

"What the divil are ye up to now?" Big Tim demanded. "Don't be shovin' away there like an old woman stuffin' sausage. Tamp it hard! In under the ball o' the rail!"

Tim turned and began pacing up and down the center of the track while the gang tamped at the cinder filling with their bars. To him there was no job in the world like being boss of the finest section on the N. & K. He believed it made the men steadier in their work to hold up to them that they were the

real responsible factors in the operation of a railroad. So he was lecturing the men good-naturedly.

"What does a mere hoghead know about the proper elevation to give a five degree curve, or about the settin' of a frog?" he challenged. "Nothin'—unless he was a section hand himself wunst."

The big Irishman paused to eye the work of his gang critically.

"The hoghead an' conductor is responsible for the safety of a train," he continued, "but it's you an' me that makes the road safe for them boys to ride on. 'Tis human lives we watch every hour o' the twenty-four. 'Tis not a line o' cars, but a line o' life marchin' over you an' me, lads. An' if old Tim Halloran overlooks the gage of a switch point or misses a broken rail, what happens? Hey?"

The men were too busy to comment, so the boss answered his own question.

"Tim don't do them things. He's the man that worries, an' wakes up in the night listenin' for trains an' askin' himself, 'Did ye forget anythin'? Are ye sure the whole of your section is without a single loose bolt, or a rail an inch out o' gage?'"

The foreman fell silent a moment. Suddenly he turned and addressed his crew almost fiercely.

"I had a boss once on the Canadian Pacific. Kelly was his name. There now was a man to pattern yerselves after. We was unloadin' steel when he got the weight of a rail acrost his back, crushin' him like a blade o' meadow grass. I saw he done for, goin' fast, an' I says to him slow like, 'Have ye any word, Kelly, before ye pass away?' He was lyin' on his back, but he steadies himself an' looks me in the eye, an' there was even a smile on his quiverin' lips. 'Tim,' he says, 'Tim, me boy, give me regards to the roadmaster.'"

With an effort the foreman roused himself from his reverie, brought himself back to the work at hand.

WINTER broke over the North that night with a still cold that held everything in a viselike grip. The ties were cemented in their ballast beds. Further track-raising would be out of the question until spring.

After the cold came a blizzard. Tim's orders were to cut down his crew, a job that annually tore at his heartstrings.

The gang, experienced as they were, knew the shutdown would be coming. They had prepared winter berths for themselves of one sort or another down in Nome. That is, all but Chet Howard. Chet had come from the sea, from the dank stokeholds of tramp steamers, to go prospecting in the Far North. When his meager savings had run out with no sign of the big bonanza, no showing in gold dust for all his efforts, he got a job on the railroad.

After a taste of it, the steel seemed to enter his blood. He liked it, liked the men he worked with. But because he didn't know, he had made no preparations for taking care of himself during the long Alaskan winter when perpetual night hovered in the star-studded heavens and deep snows tied up the railroad for weeks at a time.

Big Tim was allowed to keep one man throughout the winter. He chose Chet.

It was a little place where the two lived in Tim's neatly kept cabin. The squat, empty Anvil Creek depot, the section foreman's dwelling and the tool house, all painted a dull red, stood

alone in the white waste of hills and snow-covered country.

In course of time Anvil Creek was no longer marked by its banks, but by a clean white avenue that wound and twisted between fringing clumps of snow-decked willows. Infrequent drivers of dogsleds used that lane traveling to the up-country. Their trail took them right past the foreman's cabin. Chet always waved to them as they went by.

When the weather was good for prolonged spells, the tracks would be cleared by plow, and for a time trains would run to Shelton, the terminal at the upper end of the hundred-mile line.

During such periods it was the duty of Tim and Chet to walk track. Tim took the day shift. Chet tramped his fourteen miles at night, setting out from the tool house at seven o'clock and making it back to the section house at six the next morning.

It was a harder watch than any Chet had ever stood at sea, longer and lonelier. From the time he passed the depot early in the night with his red lantern in one hand, his white in the other, and the wrench, bolts, spikes, and short-handled maul in the bag across his shoulders, until he made the return trip in the morning, the young railroader met no living creature of any kind. Occasionally up on the divide where there was some timber he could hear the howl of a gray wolf in the distance.

During these solitary watches, Chet found much time for reflection, and mostly he thought about the iron trail. Though his mind often reverted to Tim Halloran's lectures, he had his own ideas, his own ambitions regarding the future a fellow might choose for himself and still be a railroader.

Spring came early, with an inexplicable thaw. Just about that time prospectors came down to Nome with wild tales of a new gold discovery in the rugged country beyond Kougarok Valley. Gold that ran a dollar to the pan, and would make any man rich.

By almost superhuman efforts the management cleared the road of melting snow, and pressed all its available motive power into the business of handling the rush. Men swarmed the trains that would take them to Kougarok Valley, whence they could start out afoot for the new gold strike.

There was little attempt at a regular schedule. Night and day for a short period, whenever passenger cars were filled and engines ready, trains crowded with eager gold-seekers sped over the glistening rails to the upper end of the line. The trains returned empty as best they could through the rush of northbound traffic. It was a hectic time for everybody.

THEN one night the ice went out of the broad stream known as Anvil Creek. Darkness fell with a strange awe. A thin wind blowing soaked like water through the heaviest clothing and crept along the skin with icy contact. It seemed to presage evil, some great unrest in nature.

When he reached the low, quarter-mile wooden bridge that spanned Anvil Creek, Chet found the ice groaning and cracking under its thick blanket of snow. Somehow it made him think of the ice fields of northern seas and sent a host of sailor superstitions humming through his head.

The bridge was three miles north of the depot, at a spot where the N. & K. made a sharp bend to cross the stream and carry its tracks along the far side of the water course. It was an old bridge, not very strong at best. Slow

orders were out for it all the time, orders which were more or less disregarded by enginemen.

Hoggers generally shut down at the bridge and allowed their trains to thunder over it of their own momentum, wringing groans from the weakened joints of the ancient structure and leaving it shivering long after their tail lights had vanished from sight.

A touch of nervousness came to Chet as he crossed the creaking structure.

When he reached the bridge again on his return trip a cry of amazement escaped his lips. *There was only a big black gap where the center of the trestle should have been!*

In the feeble glow of his lantern he saw the abutting wall of the ice gorge that had piled against the trestle and carried it out when the ice broke. Great blocks of ice, still carrying their sheeting of wet snow, crunched and packed together in a slow moving procession through the narrow opening in the channel. Among them he could make out skeleton timbers of the bridge which appeared to have been just pushed over and left whole.

Chet began to sweat. The load of responsibility of which Big Tim so often spoke was here suddenly increased a thousand fold. Chet thought of the strings of empty passenger coaches coming down from Shelton, There might even be a night extra hurrying men to the scene of the gold stampede above Kougarok Valley. It was not cars, but lives for which he was also responsible.

Swiftly the track walker wedged his red lantern between two ties, then raced back the regulation distance and put out his torpedoes. Returning to his danger signal, he faced the question of getting over the ice-packed stream and back to the section house to rouse Tim, and warn any northbound trains of the gap in the bridge.

Chet leaned over and looked at the treacherous river lapping the piers with a warm gurgle one moment, grinding thick blocks of ice against it the next.

It wasn't much of a job to swing down and hold onto the end of a tie, lantern over his arm, until a big piece of ice churned under his feet. Nor was it an undertaking that seemed perilous to Chet to step from block to block, working his way across the channel. The ice was thick.

The shore ice was sound, and Chet made for it steadily, although the current was carrying him downstream.

Five yards from solid ice his legs went through a mass of soft snow which he mistook for safe footing. Chet threw himself forward and caught an ice cake within reach, but he lost his lantern in his effort to hold his head above the icy water.

It was a sharp fight for the shore. Chet made it, drenched from soles to chin, his garments stiffening on his tired limbs. Perhaps if he trotted back to the section house it would help restore his circulation. Once there he could build a fire in the roaring Yukon stove and would soon be dry.

CHET wasn't worried. He had been drenched before. He clambered up the bank beside the trestle piers. As he reached the tracks, he heard a whistle, sounding with the regular beat of a telegraph key, signaling the dog-trail crossing down by the Anvil Creek depot.

Chet heard the scream of that whistle with terror in his heart.

"A northbound extra," he mumbled to himself. "The gold rush! A passenger train—crammed with humans!"

He glanced at the black void behind where there should have been an unbroken line of steel.

It took just a moment to free himself of his coats which clung with the weight of armor to his back, to cast his bag of tools aside with them, and bare his wet shirt to the stiffening touch of the wind.

Then Chet ran, ran without any definite idea as to how he was to stop that "Gold Rush Special," but full of the necessity of getting as far away from the torn bridge as possible, and saving the human freight aboard of her.

Chet's feet pounded the track without feeling, his limbs obeyed the onward impulse like nerveless shafts. His shirt became stiff as tin, his body ached with the pain of cold.

Several times he fell. Once his cheek struck the rail, but he arose with a dim exultation, conscious that under other conditions it would have hurt.

"Not much to gandy dancing, eh?" The words whirled joyously through his brain. "Let them ask Big Halloran. Yes, and let them ask Chet Howard."

He knew now all that the job meant. All that any job could mean.

Suddenly Chet's life had narrowed down to one purpose, one single, determined aim: the saving of that train of tense but happy miners. Most likely there were women and children on board, for in a gold stampede some men took their families along.

Chet pulled at his cap, settling it firmer on his head in defiance of the elements. He lifted his eyes to meet the headlight of a locomotive spinning along the snow-deadened road around a curve not half a mile away.

Swiftly he clutched at his cap. The lining, maybe it was dry. Maybe it would light. Matches! Chet almost screamed as he recollected that his match safe was in the pocket of his mackinaw, left 'way back beside the track when he had clambered out of the icy waters of the stream. Frantically he felt of his pockets, realizing that the search was hopeless.

Now the beam of light was wavering almost at his feet. When he looked along the track, he could see its glint on the tops of the rails.

"Stop!" he yelled wildly, swinging his arms. "Stop, you fool!"

Leaping, signaling, he strained his throat with the cry. The wind whining down on him caught the puny warning from his lips and hurled it aside into the night.

The hogger of the oncoming locomotive, sitting tight in the cab of the old high-speed, tall-wheeled Forney, saw something on the track ahead, something that appeared to move.

But he could not tell whether it was beast or human, or merely one of those fantastic shadows that flit in and out to unnerve a man on a night run. If a man, surely he would get off the tracks in time. If a beast — well, it wouldn't be the first time he had knocked a skulking fox off the road.

"He don't see me. That blamed hoghead's asleep!" cried Chet.

He felt the ground shake beneath the weight of the approaching train as he groped in the snow beside the rail.

The train was only a few rail lengths away when Chet stood full height again, the frozen cap in his hand. This he hurled with all his strength straight at the engineer's front cab window, as the bulk of the engine leaped upon him, and the gleam of the headlight fell behind, leaving him in darkness. Chet reeled aside, and the cylinder head caught him.

RED HOGAN, hogger on the Gold Rush Special, was whipping a string of five crowded passenger cars up to Shelton. He heard the engine cab glass crash, felt the impact of something soft that hit him full in the chest, and then he saw. It was a man's cap, and in it was a chunk of frozen snow crust, rolled there to give the missile carrying weight.

To "big hole" his jack, open sander valves, and shut off steam was work done on the instant, instinctively, and Red brought the locomotive to a shuddering stop. Back a little way, the train crew found Chet Howard, and puzzled over him, wondering why he had acted so.

"He's just a track hand," remarked one of the men. "I seen him workin' on Big Tim's gang. Must o' gone slug-nutty."

Red Hogan said nothing. His fireman and a brakeman had gone ahead of the halted, panting locomotive to reconnoiter. The pair were coming back now, lanterns dancing.

"The bridge's out!" gasped the fireman. "Ice carried it away near this end o' the trestle."

Red Hogan bent over Chet. Between the frost and the engine, it seemed that he had suffered more than his body could bear. Hogan, however, noticed a flicker of breath. The train crew rolled him in their own overcoats, and carried him into one of the cars.

Within a week he was able to sit up and take notice, and talk to visitors. Superintendent Slawson called on him at the hospital down at Nome. Chet brushed aside the idea of a monetary reward for what he had done.

The superintendent smiled. "You have been with the N. & K. less than a year," he said, "and this is your first railroad job, I understand. Maybe we can give you something better than a job on the section."

Chet closed his eyes. He was thinking of Big Tim Halloran, of Big Tim's teachings. He was also thinking of his own ambitions to become a real railroader. When he opened his eyes, he spoke to Superintendent Slawson quietly, earnestly.

"I guess that can be arranged," said Slawson. "As soon as you're able to work again come in and see me."

THE short Alaskan summer was well advanced. The gold boom up beyond Kougarok Valley died down to normal proportions. The N. & K. was running on regular schedule, and Tim Halloran had his section gang busy raising track and banking curves.

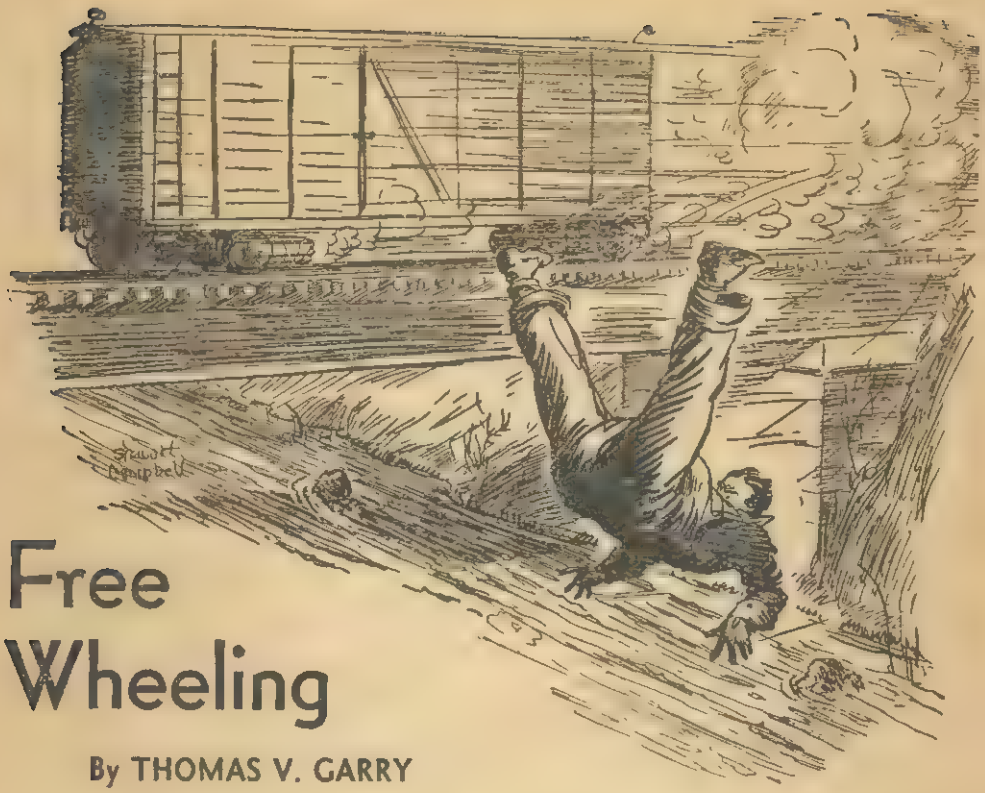
Tim and his crew were grouped around the tool house one morning as Number 9, the passenger local for Shelton, pulled into the red depot at Anvil Creek.

The brakeman swung down from the rear end platform—a young, new brakeman in a brand new uniform. He waved at the tool house gang.

Big Tim grinned back affably. As Number 9 pulled out again, the section boss turned to one of his men.

"Remember that lad? Chet Howard. Used to be one o' my boys. 'Course he means well, an' he has the makin's of a railroader in him. But what I can't get over is why he didn't strike Old Man Slawson for a section. O'Hara, why didn't he ask for a section, an' be a *man?*"

Next Month: "CHRISTMAS MAIL," by John A. Thompson



Free Wheeling

By THOMAS V. GARRY

Everyone Who Believes This Yarn Will Please Stand on His Left Ear

I'M an old man now. I've put a great deal of Life behind me. But I'll never forget a little job of rough riding I done over on the G. & O. one time. I was hind shack on a freight run over on the Mountain Division and I want you to believe me when I tell you there ain't ten miles of level track in that whole division.

She's a steady uphill pull all the way from Yarmouth to Hazleton, a distance of 132 miles.

Anything you wanted to set out had to be tied down an' locked up, like a runaway bull, and then it was about an even bet that something would get loose and take off on a non-stop hop down that old mountainside.

On this particular afternoon I was doing some switching at Hobart. There was a car of wheat that was wanted first out on the lower end of the passing track, which was clear. The hogger and I wasn't on any too good terms, and he'd been riding me all day long.

He gave this car of wheat a boost at the upper end of the passing track, and then stuck his hard head out of the cab and yelled: "Ride that one, cowboy, an' lessee how yuh tame her!"

I thumbed my nose at him, and when she got down to where I was standing

I scaled her to be ready to tie her down at the east end. I guess I took my time getting up on her deck. She was sliding along about ten miles an hour when I figured it's about time I gave her tail a twist.

Just as I started to wind her up, I noticed I was going to have to do some tall pinching to get her stopped before she got to the main line switch. I guess this rattled me a bit. Anyway, I gave her a healthy twist with my gaffer, and—well, something happened that had no business to happen. Chain broke, I guess, and there she was heading for the main line at fifteen miles an hour and picking up speed fast!

Well, sir, the first thing I knew—wham, bang!—she ran through the switch, stuck to the rails, and meandered out onto the main line and headed down that mountainside. I was atop her with a gaffer in my hand and nothing to use it on!

By the time she got well out onto the main, that old gal was hitting forty, if she was turning a wheel. The whole thing happened so quick and took me so by surprise that it sort of dazed me, but I had presence of mind enough to keep an eye out for a good place to jump, while I twisted her tail in a panicky way, trying to get some brake action out of her. Then I began to realize she didn't have no more brakes than a steamboat.

Now, I know some of you young fellers ain't going to believe me when I tell you the rest of this story. I'm expecting that, and it don't worry me.

In a few minutes the town of Charter hove in sight, six miles below where she got loose. By this time that old grain crate was traveling so fast that when she whizzed past the Charter depot the breeze from her was so strong that it smashed in all the windows, swept the platform clean of milk cans, and upset a dray wagon.

She took the curve just east of Charter on four wheels, and then settled into a straight stretch of downhill track at a speed that would make your shirt tail roll up your back like a window shade!

Now, I'm no judge of speed above 70 miles an hour, but if that old granary wasn't doing twice that, then she was standing still.

She lurched and leaped, and groaned and swayed, shooting through 300-foot tunnels like passing through doorways, her journals a-blazing and a-smoking.

I sat down and began to worry fast, knowing I wasn't going to have much time left.

PRETTY soon the town of Long Lake showed up ahead. I noticed they must have had word I was coming, as they had the platform cleared of everything. There wasn't a human soul in sight. But I left my trademark by smashing in all the windows just the same, and picked up a stray pooch that was standing by the corner of the depot and wrapped him around the hind leg of a red bull that was grazing in a pasture on the far edge of town.

Along about this time, I pulled out my watch, and when I saw what it said, every hair on my head stood up. I was on No. 1's time! She was the westbound limited, and was due to leave Georgetown, the next station down, at that very minute. I closed my eyes.

When I opened them a couple minutes later, I was burning up a straight stretch of track just west of Georgetown, and I gazed upon a sight that was the sweetest thing I'd seen in all my life. There was No. 1 in the hole for me!

The operator at Charter, it seems, had reported me to the dispatcher, and the dispatcher had put No. 1 in the clear till I got by. Mighty brainy piece of work, I thought.

Also I saw something else as this screeching, smoking comet I was aboard of came sizzling down that straight piece of track into Georgetown. At first I couldn't make out what it was, but when I got a bit closer I saw it was the operator, out on the platform, swinging his arms. I noticed the board was set against me, and that the operator had a hoop in one hand.

Well, if you think it wasn't just a shade short of suicide for me to climb down that old crate's side and grab that hoop, you're plumb dizzy, but I did it as she whizzed past. As usual, I upset a couple of platform trucks, smashed in all the windows, and slammed the operator up against the side of the depot so hard he was in the hospital for a month.

Seemed to me I noticed a couple of switch stands bent over to the ground when I looked back, but my mind was a bit foggy by this time, and I may have been seeing things. Anyhow, I know this for certain: If the telegraph poles had been ten foot closer to the track, there wouldn't have been one left upright.

I climbed back up to see what my orders was. It was a message from the dispatcher, saying that if I couldn't get that old blunderbuss of mine stopped by the time it got to Logan, they was going to derail her. Wasn't that considerate of them brass hats? Then a idea hit me.

Logan was the next station down—about ten miles. At the rate I was traveling I was dead certain I'd be there in just about four minutes flat. About a half mile this side of Logan the G. & O. crosses the Chanute River. My only hope was to jump into that river. The Chanute was only about a hundred yards wide where we crossed it, and about twenty feet deep, but I made up my mind right then and there that they wasn't going to derail the car with me aboard.

SO I peeled my eye for that river, and pretty soon I saw it rushing at me up ahead.

Well, brothers, I reckon I timed that jump pretty accurate, considering everything. When I figured I was about 150 feet from the bridge, I let go, and danged if I didn't land just about in the middle of it!

Being as it wasn't Saturday night, I was not in need of a bath, but got one just the same.

When I came up again, that old comet was a roaring, smoking streak of fire and brimstone, burning up them rails into Logan.

Now, the town of Logan is built right at the bottom of a pretty blamed high and steep hill. This dispatcher was as good as his word. He derailed old Galloping Gerty, just like he said he would.

I was just about pulling myself up the river bank when I looked up and seen her go slam-banging up the side of that mountain. She hesitated just a second at the top of it, and then went roaring down the other side, and that's the last I ever seen or ever want to see of that sizzling old grain bin.

Over on the other side of that mountain there was a Indian reservation. Now, who ever heard tell of a Indian planting wheat? Nobody, but a month or two later, wheat began to spring up all over that reservation. And there was only just a few of us who knew how it got planted there.

Famous ENGINEERS

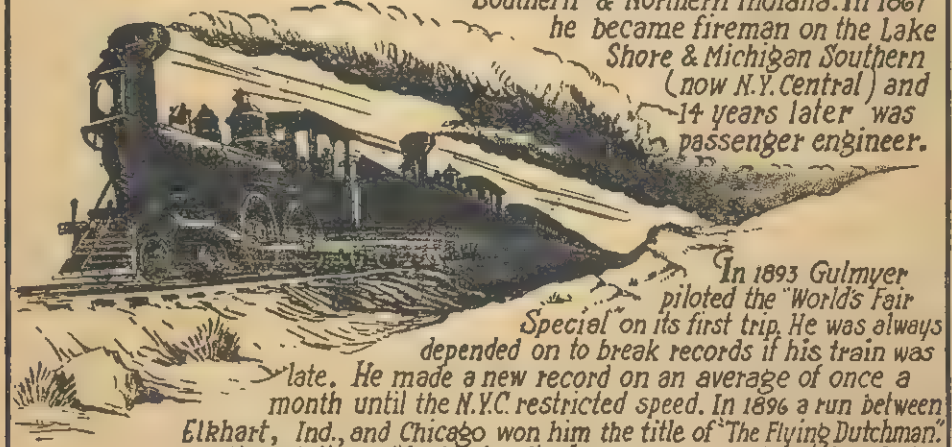
By Stookie Allen

Born in Germany, Dec. 7, 1846. Came to America in a sailing vessel. The voyage took three months.

John Gulmyer

"THE FLYING DUTCHMAN"

Fought in Civil War, then hired out as a watchman on the old Michigan Southern & Northern Indiana. In 1867 he became fireman on the Lake Shore & Michigan Southern (now N.Y. Central) and 14 years later was passenger engineer.



In 1893 Gulmyer piloted the "World's Fair Special" on its first trip. He was always depended on to break records if his train was late. He made a new record on an average of once a month until the N.Y.C. restricted speed. In 1896 a run between Elkhart, Ind., and Chicago won him the title of "The Flying Dutchman." Even though it was "double-heading" he once ran the "Twentieth Century Limited" from Toledo to Elkhart, 133 miles in 98 minutes.

Next Month—Cy Warman, of the Denver & Rio Grande

Building a $5 Engine Model

By EVAN TAYLOR BROWN

IT is one thing to construct a model locomotive in a machine shop with power tools such as drill presses, high speed metal saws, power shears, etc., and a light foundry at your disposal. It is quite different to build your model at home on the kitchen table, with hand tools and whatever material you can find lying around. I have done both. My hand-built model is the one that has attracted the most attention from those in high places in the railroad world. It is the 5229. (Photo on page 81.)

The model I refer to has been featured by International News, and used commercially as a window display. It is a Hudson type locomotive of the 5200 series, 4½ feet long with tender. The engine alone weighs 54 pounds; the tender loaded weighs 26½ pounds.

Though she has the general lines of the Hudson 4-6-4 fast passenger engine, I have elaborated on the valve action for window display purposes, giving her six moving levers, connected with two oilers on each side. This, when running on an endless belt, is very effective. She had run on one display an average of eight hours a day for 54 consecutive days, without any attention except regular stops at four-hour intervals for oil (incidentally, the oilers are not practical) and the intricate valve action shows no sign of wear.

I advise anyone building a model by hand first of all to *know your locomotive from pilot to rear of tender, up and down.* Get a mental picture of the exact lines, for lines are important in a model. To make a model realistic you should take note of the right arc to the roof of the cab, the relative height of the stack, and the lines of the ensemble as seen from the rear of the tender looking forward and from the pilot looking back along the side.

Before beginning a job obtain as clear a photograph as possible. Railroad publicity agents usually are willing to supply photos for model building work.

I have built several models. My first attempt, a three-hundred-hour job, I broke up. My second had the proper lines, but was mechanically faulty. My last attempt stood up, and is a good job. It has paid for itself many times over.

Now as to material: Plenty of tin cigarette boxes are needed for the cab, fire-box, grease boxes, sides and rear of tender, trim for rods, cylinder bands, cross heads, etc.

A length of round hand-rail 3⅜ inches in diameter serves for the boiler. I have used three types of frame in as many models. The rigid types I find most practical and adaptable. It is cut from wood of medium hardness. The bearings are set in ⅜-inch drills and lined up for free running axles. Bearings and axles are important. If you put your model out to work for you, it must stand constant running, and run true as a die.

The drilling of the rods must be exact, not the least bind. I cut my rods

from an old piece of soft brass, building them up and masking them over with strips of cigarette tin, building in the channel and banding them all around so they have the appearance of being of heavy steel. Strange as it may seem, the cross heads also are made up of cigarette tin and show no signs of having to be replaced, notwithstanding the hard service they have been through. They have the appearance of steel, strongly riveted and durable.

The engine is well sprung, having six point suspension. There are six springs of proper tension, made up of thirteen leaves, cut from very thin steel. When the model is in operation they give it just the right amount of roll. This feature in part accounts for the good condition of the model after hard service, as it does away with much of the vibration from the belt on which it runs.

OUTSIDE of wheels and paint, most of my material was at hand, or could be had for nothing. My headlight, designed for battery or A. C. (transformer), is simple but effective. It consists of a pocket flashlight socket set into a ⅜-inch hole drilled ½-inch deep in the front of the smokebox, later covered with an electric ceiling fixture. The hole in the center lets the light out into the lamp house, which is cemented on the fixture.

The method of wiring is simple. A small screw is placed into the hole with a wire attached (wrapped around). Then set in the socket, leaving a small flange on each side for anchorage. To one side of the socket solder another wire (to the flange), one runs to the positive terminal of the fountain pen battery in the air drum. The other leads to the negative terminal. Now screw in the bulb till it rests against the screw head, thus completing the circuit. The lamp house and lens is the small end of a telescope camouflaged, and with the regulation number plates on each side and underneath in front.

The switch controlling the headlight is the throttle. When the throttle is open, the light is on. When closed, it is out. The circuit breaker is on the quadrant.

On this type of locomotive the air plants are up ahead, on the pilot, just even with the front of the boiler on each side, with fenders in front of both plants. I made good use of some old Alemite grease cups, which may be worked up to look like the real thing with a little time.

Now as to valve gear and oilers: This may be made an easy job or an impossible one. Of course practical oilers mean machine work, and in this case are not to be considered. Inasmuch as the average person inspecting the model does not take into consideration the fact that the oiler does not work as an oiler should, a well faked job will answer, so long as the action is there.

A small radio accessory, by the trade name of "humdinger," serves nicely. This is a machined piece 1¼ inches by ¾, with a swivel machined in. I merely soldered a throw lever to the swivel and connected it to a drop lever, which in turn hooked up with the combining lever.

A connecting rod from the swivel set at the quarter ran back to the second or auxiliary oiler just over the front of the link frame. It means a lot of careful work, but the result when the engine is in motion is worth the time and effort. All the running gear except wheels is in nickel plate (cigarette tin laid over the base). In hooking up the valve gear I find small rivets to be the best method, though they

must be made from four penny nails. Solidly riveted, there is no danger of a jam-up at high speed caused from losing a nut. For finish I cut up a 5c key chain made of small brass beads, then cemented a bead to the rivet heads with cold solder.

For a stack, I found that I could do no better than the funnel of a "Log Cabin" syrup can, cutting it out and leaving a ⅜-inch collar which will roll to fit the arc of the boiler. After cementing in place I lay on the rivets around the collar, giving it a solid appearance.

For steam and sand domes, I found that metal pill boxes of the right shapes may be built up to serve the purpose. Of course I did not find pill boxes all ready to install. It meant a bit of work. For my markers I used a red and green glass button cut with a diamond face front, which is set in a small composition base. The head is backed by silver, thus giving the appearance of a light. The lamp houses I cut out of soft wood with a knife, cementing the beads on three sides and cowling them with a ⅛-inch strip of tin. The lamps are painted black.

Couplers I cut out to shape by hand (wood), then banded them with tin, completely masking them over. Each coupler has a pin lifter with pin in place, which may be drawn. I did not use the drop type on the pilot coupler. Instead I used the rigid, as it shows up better.

The cab lines, I think, are one of the most important, as well as most difficult, to model. Usually we amateurs are at fault there. The tendency is to build too high. Most modern locomotives have a cab that is, at its highest point, only a few inches (if at all) above the jacket. I built four complete cabs before I at last left one on.

I constructed the frames of soft steel, in skeleton. Then I built up with tins. The trick is to get just the right arc to the roof. Even though I had the exact figures and laid it out accordingly, the first three were out just enough to spoil the lines.

Heretofore I have mentioned rivets. My rivets are inexpensive and effective. Twenty cents worth of a particular type of small conical black bead does the trick. They are set in their proper lines, just as the paint is nearly dry and at its most adhesive state. They show up just right and add to the "finish" of the job.

Hand-rails and pipe lines on the outside of the boiler are ⅛-inch steel drill rods. Water lines are of copper, and air lines of black spaghetti insulation.

MY cab interior, though only 4½ by 3⅜ by 4 inches high, is complete in detail, containing, each in its proper place, the following details:

Throttle operating on a quadrant on which is a circuit breaker which operates the head light, train line air valve, engine line valve, clock gage, stoker valves, speedometer, firebox doors and cab semaphore, seats right and left, glass windows set in movable frames, and wind shields. Also two water gages, reverse wheel, and valve control.

My throttle is a two-inch cotter pin, latch and rod attached. I used the bar type instead of the marine type. The quadrant I found all made up in a small steam gage with the notches machined in. The reverse and valve wheel is the flywheel of an old clock. Brake valves I built up of small scrap, moulding the handles of wood and covering them with tin to fit. The clock gage and speedometer are two very small compasses, watch-charm size. A small radio fuse serves as water glass. Each

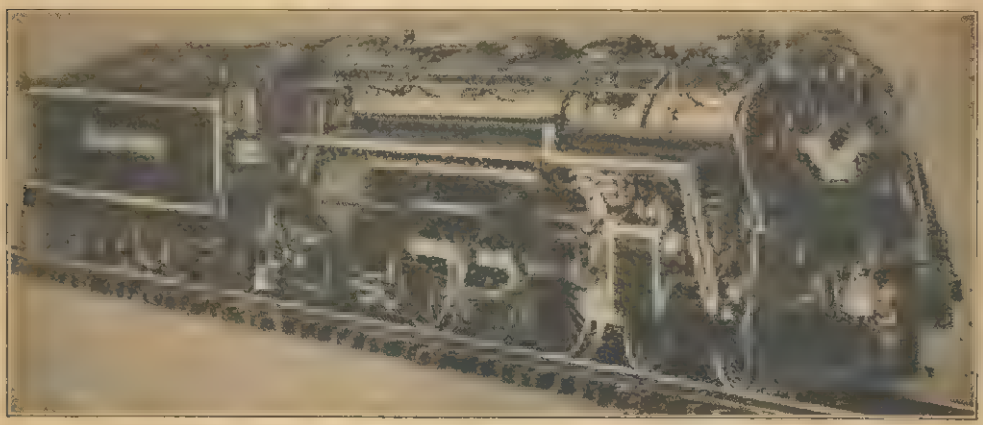
and every item is in its proper place, and the right amount of room is left on the deck. It all took some figuring, considering the space available. The striping on the tender is ⅛-inch strips of tin foil laid on while the paint is still sticky. It must go on right the first time. Once on, you would find extreme difficulty in removing it.

The tender holds ten pounds of coal. Automatic train control boxes and lines are just back of the fuel slide over the tank.

The locomotive and tender has a complete set of brakes. On the locomotive, when in service, I keep the rear pull-up brakes set at a few ounces, as I find that it seems to operate better that way than running absolutely free. The brakes run by a small coil spring operated on an upward pull. They can be set till the wheels lock. When on stationary display I find this a great advantage, because it eliminates the possibility of some grown-up youngster pushing the mechanism to see it work.

Since the model appeared in International News from coast to coast, I receive mail almost daily, asking for details as to how a model of that type and size can be built for less than $5.

I do not say that everybody can build such a model. The model maker must have some knowledge of mathematics, a natural bent for mechanics and the will to keep at it till the locomotive stands on his turntable work track ready to roll. If well done mechanically and the lines are right, she will work for him in window displays, etc., and pay well for his time and labor.



Model of the 5229, Built by Evan Taylor Brown, 1039 Catalpa Ave., Chicago

I am not a mechanic. I am a violinist. For eighteen years I have been an orchestra leader in one of Chicago's legitimate theaters. I have two hobbies, golf and locomotives. Right now I am getting another model under way and sending out details on this method of construction to my correspondents.

Since starting building models, I have made a lot of friends and have made a fair showing on the books for rentals, etc., of my models. I never sell them. Besides all this, I get a lot of fun out of this hobby! After all, what else is there to ask?

Letters from Model Makers

MY latest model is the old 4-4-0 standard American type loco that made railroad history. This is a working model running on the standard 2¼ inch gage toy

electric track. She is made of brass and steel, very solid construction.

Dimensions (in inches): Length of engine and tender, 21¼; length of engine alone, 14; height at cab, 4⅞; width, 3⅜; length of tender, 7⅝; width of tender, 3⅜; height of tender, 3½; drivers, 2¼ diameter; all trucks, 13/16.

Weight of engine, 10 lbs., 2½ oz.; weight on drivers, 7 lbs., 12 oz.; weight of engine and tender, 14 lbs., 3½ oz.

An electric motor is enclosed in the firebox and wagon top of the boiler and geared to the rear driver axle, ratio of 15 to 1. Power is transmitted to forward drivers through the side rods. One of the collector shoes is located between the forward drivers, the other between the rear wheels of the rear tender truck. They are not visible to anyone looking at the side of engine. She is equipped with hand reverse. This is accomplished by turning the number plate on the front of boiler to right or left.

The engine is complete in detail, link motion, valve gear, etc., and is so closely coupled to the tender that she has the apron hinged to her deck and extending over to the footboard of the tender. She takes all curves and switches beautifully.

Her frame is made the same as a big engine. The driver axle boxes are in slides and are linked with equalizing levers, allowing a vertical movement of 1/16 inch. This insures smooth running, even on rough track.

In building the model I faced several problems. First, I had no prints or drawings of any kind to follow. Only a few pictures printed in your magazine from time to time. As these were all different, I couldn't scale them to work from, so I had to call on my memory for most of the design.

Another problem was that curves on a toy track are of much smaller radius in proportion than curves on standard railroad. This limited the length of the engine to track well on the curves. I overcame it by slotting the pivoting point of the engine trucks, which allows them to swing in on curves. However, the slot has a rake back from the center to each side of about one quarter of an inch, to allow the wheels to clear the cylinders by a safe margin as the truck swings in.

From this limit in length I had to work out all other proportions, making many drawings until they looked right.

My next restriction was the space between the frame after the driver boxes and equalizing levers were in place. This limited the diameter of the firebox, which had to contain the electric motor and not have any of it exposed. After looking through all the toy railroad catalogs, I found a motor in a narrow gage engine of a standard make which I could use by cutting it down every place possible and adding extra gears to increase the ratio to 15 to 1. This gives power enough to slip the drivers when holding the engine back.

The saddles, cylinders, link motion supports, crosshead slides, pilot, trucks and drivers are assembled on the frame in one unit. All can be taken apart if necessary. The boiler, cab and all the rest above the frame also are assembled in one unit. The motor is in the firebox and wagon top part of the boiler. It can easily be removed for cleaning. This unit is attached to the frame with a few machine screws.

All parts were made and fitted accurately and much time was spent on working out the details.—G. A. Vaughan, 7-01 127th St., College Point, N. Y.

* * *

I wish to buy a Dorfan No. 770 locomotive and tender, an Ives 1122 motor, hand or auto reverse, and a photo of a Mexican boxcar.—A. J. Weinman, 94 Sylvester St., Rochester, N. Y.

* * *

Can some reader supply plans of a track layout for O gage sheet metal track, for a fairly large scale? I prefer a single-track main line, yards, and only a short branch line.—Ross Jones, 124 Jefferson Ave., Vandergrift, Pa.

* * *

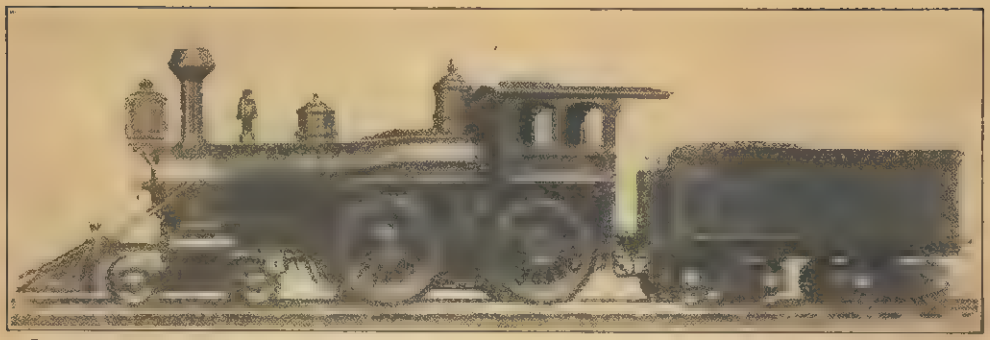
I am building a miniature railroad. To date I have one locomotive, flat car, box car, combination car, caboose, wooden trestle, and a water tower in the building. All of these have been made from plans and information in the model department of "Railroad Stories." Will exchange engine pictures for model scenery information.—Stephen M. Jones, Rossland, B. C., Canada.

* * *

Wish to hear from model makers who cast and sell their own parts. Am building an O gage and want points on 4-4-2 and 2-8-4 fine coal burners. Also want wheels, cylinders and sheet metal.—G. B. Slingerland, Box 853, Ticonderoga, N. Y.

* * *

I have a short model railway—the "Cascade Pacific"—composed of 5 flat cars and a caboose all built to ¼" scale, and am building a New Haven 0-4-4-0 engine. Local fans are invited to inspect my system. Would like to see more working drawings of models.—Lee K. Allen, 209 Oglesby St., Salem, Ill.



Beautiful Diamond Stack Model Made by G. A. Vaughan, 7-01 127th St., College Point, N. Y.

Want to hear from persons with old model equipment for sale or trade. Will trade "Century of Progress" surface line transfers for those of other trolley lines.—Arthur Kafarski, 2059 N. Latrobe, Chicago.

* * *

I am going in for standard gage railroading, and have the following O gage equipment to dispose of: 2 Ives locomotives, 40 sections straight and curved track (various makes), 3 Lionel passenger cars (607-608), 4 freight cars—oil, hopper and box cars, Dorfan, and Bing caboose, one Lionel Type A transformer, one pair Lionel switches, automatic warning signal, etc., all in first class condition. Best offer takes the lot.—Clarence Ratzburg, General Delivery, Monte Rio, Calif.

* * *

On the market there is a steel fence post the shape of a rail, 7 feet long, that sells at 25c per foot. These make good rails for miniature roads from 6-inch gage on up, and are much cheaper than real rail.—Lad G. Arend, 757 Sedam St., Cincinnati, O.

* * *

In constructing a model railroad, I am modeling my rolling stock and equipment from the Rock Island, which runs through here. Incidentally, my little road is called the "Rock Island." I have 3 box cars, a flat car, a coal car, a caboose, a baggage car, and a model of consolidation type locomotive No. 2106 under construction. My spare time is spent working on this, using scrap lumber, together with odds and ends of other material. So far my construction costs haven't exceeded a dollar. I'll be glad to hear from other model builders.—Tex Herring, 1201 N. Ellison, Oklahoma City, Okla.

* * *

My model is a one-half inch scale of an English passenger engine. She is 36 inches long, has ⅝ by 1 inch cylinders and a Joy valve gear. She has a water tube boiler and uses alcohol for fuel. The water pump is located in the tank.—LeRoy Brakke, Bensenville, Ill.

* * *

I am interested in getting either of these electric locomotives, both Lionel steam types: Nos. 400E distance control and 392E. Both use standard gage track. Also interested in rolling stock. Will trade a 200 feet 16 mm. movie film, titled "Play Safe," railroad comedy of a runaway freight train. Also have war relics to trade, or will buy. —Chester Karnacewicz, 37 Center St., North Walpole, N. H.

* * *

In the April issue you printed a drawing and description of a six-wheeled saddle tank model locomotive which I designed from data on the U.S.R.A. engine.

Since then I have answered many letters from all over U. S. and Canada about model steam locomotives in general and the saddle tank in particular, I did not think there was so much interest in models. Whoever requested you to start a model department in the magazine knew what the readers wanted.

At the time you published my drawing I was teaching in St. Charles College, Catonsville, Md., and preparing for my ordination to the priesthood, which took place in Baltimore last June 15th. This preparation will account for many fan letters not being answered. I have turned over my drawings and model material to my brother, who will handle the castings that so many have asked about, as well as details for all parts of the locomotive. Besides the six-wheeled switcher, drawings for a P.R.R. G-5s and the DD-1 electric should be ready soon. Both are to be ¾ inch scale.—Rev. John D. Mahar, 513 Warren Ave., Youngstown, O.

NEXT MONTH: "Constructing a Model Signal Bridge," by E. P. Alexander

Courtesy of Northern Pacific Ry., St. Paul, Minn.

One of the Trains Which Inaugurated Northern Pacific Transcontinental Service in 1883

An Iron Spike at Gold Creek

By JOHN AUSTIN

ON the twenty-second of August fifty years ago two railroad construction gangs, one working from the east and one from the west, met in the barren, hilly country at Gold Creek, Montana. It was a great event. The Northern Pacific Railroad, first of the northern transcontinentals, in a few hours would stretch in an unbroken line of shining steel from Lake Superior to the Pacific Ocean.

Toiling with feverish haste, the crews were now within a half mile of each other. Only a short stretch of straight track had to be laid to make the system complete.

But instead of connecting the two tracks, they suddenly veered out in a circle, away from the graded right-of-way. They built a temporary track, or "shoo-fly," around the gap, leaving almost 3,000 feet of main line to be finished. And thus the mighty Northern Pacific first became a transcontinental railroad by means of a side track a half mile long!

38 Hammond Ave., Aurora, Ill.

All Dolled Up! Northern Pacific Eight-Wheeler No. 405 Preparing for a July Fourth Celebration at the Minneapolis Roundhouse about 45 Years Ago. The Bearded Gent Is Hogger T. F. Willis

The reason for this was not hard to find, and it puzzled not even the lowliest Chinaman on the job. Henry Villard, famous president of the N. P., was out to put his railroad on every front page and in every magazine in the land. He knew that the fate of his newly completed railroad rested on the amount of publicity he could get for it. And having once been a newspaper reporter, he knew how to get that publicity.

That was why, although the N. P. had been completed on August 22nd, the final piece of main line was left until September 8, 1883. On this day the main line would be finished, the last spike driven, in the presence of huge crowds, and a great celebration would be held. Thousands of people had been invited, including President Arthur and representatives of Queen Victoria and other European rulers. Special excursion trains would be run from the East and from St. Paul and these trains would receive a big welcome in every town.

Painted Indian chiefs, cowboys, laborers, editors, reporters, railroad executives and celebrities would mingle in a scene as colorful as that which took place when the last spike was driven in the Union Pacific at Promontory Point, Utah, 14 years before.

Everything turned out as Henry Villard had planned. Although trains had been running through Gold Creek for two weeks, the last piece of main line was now built. A grandstand which had been erected was crammed to capacity. Five special trains rolled in: four from the east and one from the west coast.

Cannon boomed. Indians and soldiers moved around

nervously. Many speeches were made. Iron Bull, chief of the Crow Indians, gave a short, pathetic talk in the sign language. Translated, it said that the white man had come to stay, that the iron horse was now king, and the day of the Indians was drawing to a close.

Finally the last rail was hauled into place by a black horse. He carried a card which said: "My name is Nig. I have drawn rails 750 miles."

Soon everything was ready for the last spike. H. C. Davis, an official of the Manitoba Railroad, struck the first blow. Then Henry Villard hit the spike. Next was Frederick Billings, former president of the N. P. Many others took turns, among them General U. S. Grant.

And thus the first northern transcontinental line was finished. The last golden spike was driven home.

Golden spike? It was not a golden spike at all, but was an ordinary iron spike which was supposed to have been the first one driven on the N. P. at Thomson Junction, Minnesota, early in 1870.

Here things took a strange turn. Due to a telegraphers' strike, news could not be sent out, for the single railroad wire was taxed to capacity to dispatch the four special excursion trains!

But golden spike or no golden spike, strike or no strike, people heard about the Northern Pacific. True, it still had many years of trouble and disappointment ahead of it. Everything wasn't done when the last spike was driven. The important thing is that the Northern Pacific came through victorious and that from the very day that last spike was driven, took its place among the world's greatest railroad systems.

GOOD OLD DAYS ON THE "PEAVINE"

BACK in 1920 the Canadian National completed the "Peavine," a 65-mile line from Bonar (now Medicine Hat Junction), to Steveville, Alberta. It was the intention to push it farther south to Medicine Hat, and a bridge was begun across the Red River at Steveville. The right-of-way was practically completed for many miles south of the river. But the line to Steveville did not prove to be a howling success, and a few years ago the trestle work and tracks were taken up for about 12 miles. Today the branch ends at Wardlow, 53 miles from Medicine Hat Junction.

When it was first constructed, however, the country it served was booming, for it was one of the best wheat districts in Alberta. The railroad couldn't supply cars enough to haul the grain away; it was a common sight to see fifty wagons loaded with wheat waiting for a train to come in with empties. Wheat was worth $2 a bushel then. These were great days for train and engine crews. Only mixed trains were operated, and there was so much switching and unloading to do that they rarely made the round trip in less than 16 hours.

The "Peavine" never could make any claims for being the world's smoothest. They say that the company could never make any money on shipping syrup, because the road was so rough that it jolted the lids off the cans and the syrup leaked out. It was also said that no passenger had ever stood up while a train was moving and lived to tell about it.

But the boom days of the "Peavine" seem to have gone. There hasn't been a big crop for years. The population average is one person for every four square miles. There are only four or five crews working out of Hanna, the division point, whereas in 1927 there were 18. The official timetable shows one train a week. But maybe better days will return. If wheat goes up, if crops are good, the Peavine will come back in all its old glory.—John F. Potts.

By the Light of the Lantern

Ask us what you want to know

RAILROAD questions are answered here without charge, but these rules must be observed:

(1) Not more than two questions at a time. No queries about employment.

(2) Owing to the number of queries, no engine specifications are printed except type, driver and cylinder dimensions, weight, and tractive force (t.f.).

(3) Sign your full name and address as evidence of good faith. We will print only initials, without street address.

(4) Always enclose a self-addressed stamped envelope, to facilitate our getting in touch with you if necessary.

(5) Answers to questions are published in this department. Don't be disappointed if they do not appear at once. This department is printed two months in advance of date of issue.

WHAT causes boiler explosions?—O. S.

There is only one final answer to this question: overpressure. When the pressure within a boiler becomes so great that it cannot withstand it, that boiler will explode. Low water, the most frequently assigned cause for boiler explosions, permits a boiler to become overheated and weakened so much that it cannot contain the ordinary pressure within it. But while low water is probably a reason for many explosions, a bad boiler will explode more easily if full than if it is almost empty. The notion that it will not explode if full of water is false, for the violence of a boiler explosion is directly in proportion to the amount of water ready to flash into steam when the boiler rupture is great enough suddenly to release the pressure. Of course, this does not mean that a boiler in good condition will never explode even if the water level goes below the crown sheet. The point is that if the boiler has faulty parts, such as broken stay bolts, corroded sheets, etc., and is thereby weakened to a dangerous degree, it will suddenly give way and explode just as easily when full as when almost empty. In disasters of this kind, unfortunately, the enginemen never live to tell about it, and invariably the cause assigned is the old stand-by, "low water."

More than 20 years ago, the eminent authority on locomotives, Angus Sinclair, stated that injecting water on hot crown sheets does not necessarily cause explosions. He cited the case of the Pennsylvania Railroad, which made many tests with locomotives about to be scrapped. Several times locomotive boilers were heated to the popping point, the water drained to a "dangerous" level and cold water then injected into them. In each case the crown sheets and other overheated parts buckled and warped out of shape, but not once did a boiler explode. The only explosion during these tests was due to a faulty boiler which blew up before its steam pressure had reached the popping point.

I AM a boy 15 years old and it is my ambition to become a steam railroad man, either in train or engine service, as soon as I am out of school. My friends tell me that steam railroads are through and that I haven't a chance. Is this true?—"WALTER."

Your friends are pretty badly mistaken. Steam railroads are by no means "through," and sooner or later, as business comes back to its old standards, most of them will be prosperous and in a position to hire new blood. Even as this is written many are experiencing the best traffic conditions in two years. While it is undoubtedly true that there are or will be very few jobs for new men until the regular help has been hired back, this condition cannot last forever. It is impossible to predict what conditions will be when you get out of school a few years from now, but it is our guess that if you want to become a railroad man bad enough and keep at it long enough you eventually will be rewarded. If you are not 21 by that time it would be a good idea to try hard for either a job in a roundhouse or in a yard, depending on whether you want to be an engineman or trainman.

Photo by W. Hendry,
1221 Burnaby St., Vancouver, B. C

This Unique Tunnel Is 4,600 Feet Long, Runs Under Vancouver, B. C., and Uses Fans Which Are Automatically Started by Approaching Trains. C.P.R. No. 2705, 4-6-2 Type, Is Shown Emerging from It

J. E.—Following is a list of railroads which operate in Wisconsin. Those marked with a star enter the port of Superior.

Ahnapee & Western.
*Chicago & North Western (including CStPM&O).
The Milwaukee Road (CMStP&P).
Chicago, Burlington & Quincy.
Cazenovia Southern.
Duluth, Missabe & Northern.
*Duluth, South Shore & Atlantic.
Ettrick.
Green Bay & Western.
*Great Northern.
Hillsboro & Northeastern.
Illinois Central.
Kewannee, Green Bay & Western.
Laona & Northern.
LaCrosse & Southeastern.
*Lake Superior Terminal & Transfer.
Marinette, Tomahawk & Western.
*Northern Pacific.
Northwestern Coal.
Robbins.
*Soo Line (MStP&SSM).
Superior & South Eastern.
Wisconsin & Michigan.

IS there either an Interstate Commerce Commission ruling or a New York State law forbidding wooden coaches in steel passenger trains?—K. P. M., Canandaigua, N. Y.

At the time we are writing there are neither ICC nor New York State laws against hauling wooden cars in steel trains. Repeatedly, however, the ICC has denounced the practice. It has also urged that through trains should not carry wooden coaches at all. There is no Federal legislation on this particular subject, and we know of no state which forbids wooden coaches in steel trains.

WHY do American trains use a bell and hooter? I should think one would be enough.

(2) How long does it take to travel from New York to San Francisco on the fastest trains and where is it necessary to change cars?—J. P. B., Surrey, England.

(1) It is customary for a locomotive's bell to ring when it is moving about in a yard, where there are apt to be men working or switch engine movements. The whistle ("hooter"), on the other hand, is used to warn motorists, pedestrians, etc., at grade crossings, of which there are a great many in this country. A large part of them have no other protection than the noise of the engine's whistle, which for that reason is extremely loud and full-toned. It is also used for signaling trainmen back in the coaches or caboose. And since American whistles are so loud it would be both wasteful and nerve-racking to use them when the trains are moving through terminals. Thus there is a definite use for both bells and whistles in American railroading.

(2) The fastest trains between New York City and Chicago make the trip in 17 hrs., 45 min., and between Chicago and San Francisco in 60 hrs., 55 min., making the total time 78 hrs., 40 min. In order to take the swiftest trains it is necessary to lay over in Chicago for at least a few hours. This is the only change of cars on the trip.

IN your July issue you stated that Great Northern Nos. 3397-3399 were the only three engines built for a United States road in 1932, but in the Lackawanna roster (Aug., '33, RAILROAD STORIES) I note that ten engines were made for this road that year. How do you explain this?—A. M.

The Lackawanna engines, although not finished until 1932, were ordered and begun in 1931, and were therefore classed with engines built that year. The Great Northern locomotives, on the other hand, were the only three ordered in 1932, and in this case the order was placed with its own shops and finished the same year.

HOW are European cars coupled together?—L. P., Los Angeles.

We are printing herewith a photo of the end of a car in an English train, the "Royal Scot." It shows plainly the type of coupler used on most European roads, as well as many in South America. To make our explanation of how it works easily understood we shall not adhere to technical nomenclature, but describe each part as simply as possible. First of all, there is the end link, which you can see hanging down in front of the air hose. When two cars are to be coupled this is hung over a hook on the next car. (On the car in the picture you can see the end of the hook just beneath the door.) Then the screw from which the end link is hanging is tightened up with the screw bar until the buffers on both cars are pressed together. The buffers in the photo are the large, smooth discs which you see sticking out from the car on each side of the coupler. Thus there is little or no slack between the cars, depending on how much the screw is tightened. For this reason European passenger trains start without jerking. However, the coupling process is a long and dangerous one, and obviously cannot hope to compare in efficiency with our automatic system. Note, too, that when two cars are coupled one device is not used, but is left to dangle, whereas every time two American cars are hooked together every part of their couplers is fulfilling a definite and necessary function.

Photo by W. A. Lucas

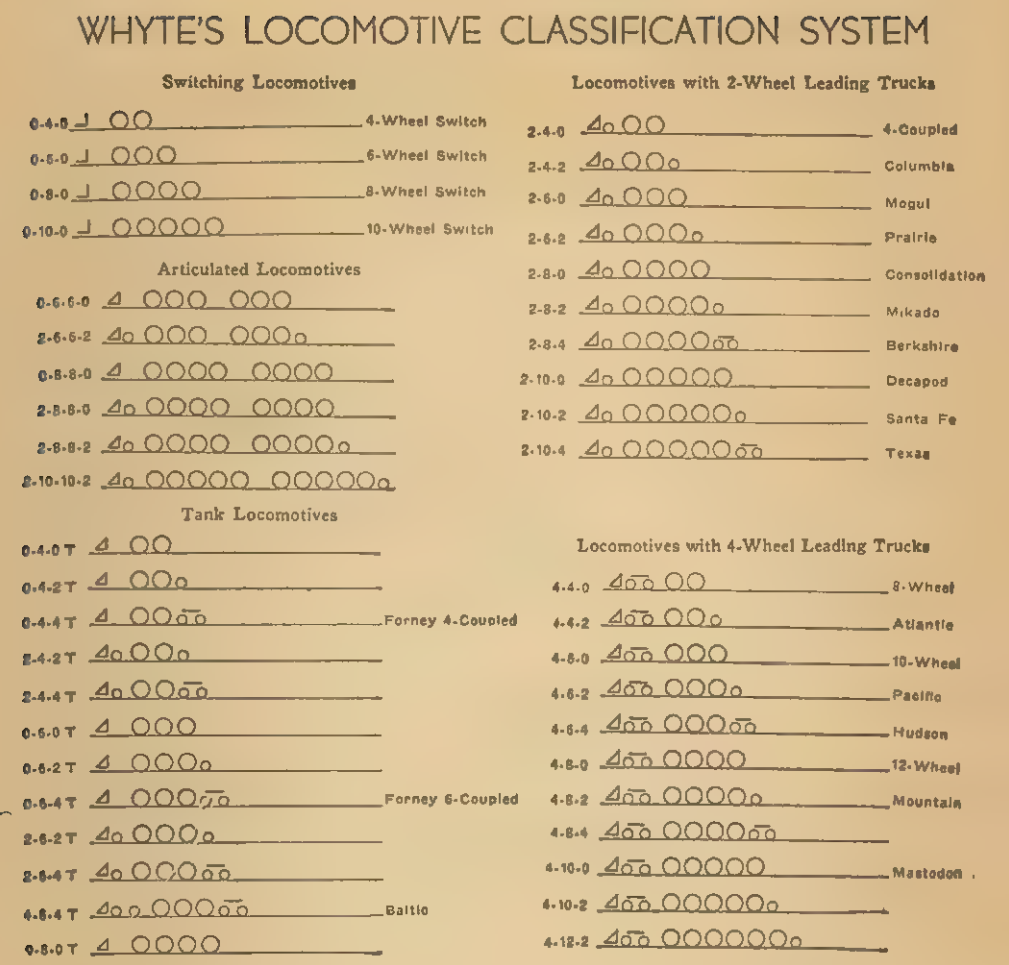
Coupling Arrangement on Cars of the English Train, the "Royal Scot"

ARE British locomotives more powerful per ton of weight than American? The "King" Class of the Great Western, for instance, weighs 271,400 lbs. and exerts 40,300 lbs. t. f., whereas Pennsylvania Class G-5s, of the same type, weighs 413,500 lbs. and exerts only 41,238 lbs. t. f.—R. W., Sharpsville, Pa.

In the first place, your weight figures are not correct. The British "King" types weigh 199,360 lbs. without tender, and the Pennsy G-5s 237,000 lbs. without tender. The difference between the two can be accounted for by the fact that the "King" types are newer engines, and use four cylinders and 250 lbs. pressure. Undoubtedly they are more modern and efficient machines than the older PRR engines, so the comparison is hardly fair. Except for their wheel arrangement, both are entirely different locomotives, designed to meet different operating conditions. The "King" type, for example, has 34.3 sq. ft. grate area, whereas the PRR engine has more than 55. American builders have to provide large grate areas, plenty of heating surface, etc., to enable engines using certain types of fuel to haul heavy trains at certain rates of speed over long distances. All these mean heavier engines.

Moreover, you must remember that tractive force, as a measure of a locomotive's power, is purely a theoretical figure, for it is calculated

WHYTE'S LOCOMOTIVE CLASSIFICATION SYSTEM



from the dimensions of the engine's cylinders, drivers, and amount of steam pressure. You can increase the theoretical t. f. of any locomotive to 100,000 lbs. by fitting it with giant cylinders, but doing so will not make it any more powerful until you give it a boiler large enough to supply it with steam. A larger boiler means more weight. It also means a bigger firebox, especially where lower grades of fuel are burned. These are a few of the factors in the tractive force-weight ratio. If you will compare other British and American locomotives, especially those built at the same time, with these things in mind, you will find that it is foolish to give either nation an edge on superior design.

L. G., Chicago.—On page 45 of our Sept., 1933, issue, we quoted J. S. Peter as saying the Denver, Utah & Pacific was made standard gage in 1899. This should have read 1889. Our apologies to Mr. Peter.

WHAT is a superheater for, how does it work and where is it located?—E. P., Chicago.

(1) When steam is evaporated from water with which it is in contact, its temperature is always the same as that of the water. Therefore at any pressure it has a certain temperature. Such steam is known as saturated steam. Until well into the 20th Century most steam locomotives used saturated steam. Its great disadvantage was that it naturally cooled and condensed quickly when doing work in the cylinders, and the amount condensed was in proportion to the heat given up.

About 25 years ago, superheating devices came into wide use. In them steam is separated from the water and heated before entering the cylinders, thus increasing its temperature and its volume *at the same pressure*. Superheated steam does not exert any more pressure on the cylinders, but since it has a much higher temperature than saturated steam it does not cool and condense

From W. D. Stowman, 7444 Forrest Ave., E. Germantown, Philadelphia, Pa.

One of the Few 4-4-4 Types Ever in Existence Was Reading No. 110. The Reading Built 4 Such Engines in 1915; Nos. 110-113. Shortly Afterward They Were Rebuilt to 4-4-2 Types and Numbered 350-353. They Are Still in Service

nearly as quickly, and therefore it can do more work. As you can see, superheated steam weighs less than saturated steam—the higher its temperature the less its weight. This means more steam from less water, reduced back pressure and more work done.

Briefly, a superheater is an arrangement of tubes, usually located in the firetubes of a boiler, through which steam from the boiler is passed and *super-heated* before doing work in the cylinders.

(2) Baltimore & Ohio No. 5510, 4-8-2 type, 19 ft. 3 in. driving wheel base, 44 ft. 7 in, engine wheel base, 93 ft. total wheel base. Its leading wheels are 36 in. in diameter and trailing wheels 46 in.; boiler 89⅝ in. diameter at first course. The firebox is 198 in. long and 96 in. wide.

A. L. D., Atchison, Kan.—Burlington Nos. 3000-3011, 4-6-4 type, have boosters (on trailing trucks) which exert 11,700 lbs. t. f., bringing the total t. f. of the engines up to 59,400 lbs.

Information on this road's latest proposed power was given on page 89 of our last month's issue.

WHAT will be the mileage from Denver to Salt Lake City over the Dotsero cutoff? —H. P. C., Ontario, Calif.

At present the Denver & Rio Grande Western covers 745 miles between Denver and Salt Lake City via Pueblo and Salida (the Royal Gorge Route). The new line will use Denver & Salt Lake tracks for 129 miles between Denver and Orestod, Colo. The cutoff between Orestod and Dotsero, according to latest figures, is 39 miles long. From the latter place it is about 401 miles to Salt Lake City, which will make the new mileage between Denver and Salt Lake City 569, saving 176 miles over the old route. In our Dec., 1932, issue, we stated that the line would be shortened by 173 miles, but at that time the cutoff was planned to be 42 miles long.

O. C. W., Allentown, Pa.—Rock Island No. 999 is at present 4-6-2 type. A few years ago the Rock Island had two 4-8-2 types, Nos. 998 and 999, but their numbers were changed to 4000 and 4001, respectively. Wesley Krambeck, of Herington, Kan., has photos of No. 4000.

H. E. E., Chicago.—The Evansville & Terre Haute was leased in 1880 for 999 years by the Chicago & Eastern Illinois. The Ohio Valley was taken over by the Illinois Central in 1897. The Keokuk & Des Moines was acquired by the Rock Island in 1878. The Vandalia was leased in 1880 for 999 years to the Terre Haute & Indianapolis, which was then controlled by the PRR. The Terre Haute & Peoria is now also a part of the PRR.

The Chicago & Eastern Illinois Ry. was incorporated in 1920 to succeed the Chicago & Eastern Illinois RR., which was the successor of the Chicago, Danville & Vincennes, sold in 1877.

The main line of this road was built in 1871 from Dolton to Danville, Ill. On page 98 of our Jan., 1933, issue you will find a short history of the Chicago, Attica & Southern.

GIVE a short history of the Maryland & Pennsylvania RR.—T. N. B.

(2) What is the motive power roster of this road?—C. A. V., Pittsburgh.

(1) The Baltimore & Lehigh RR., a 3-foot gage road organized in 1881, was sold under foreclosure in 1894. Its Pennsylvania Division became the York Southern, and its Maryland Division became the Baltimore & Lehigh Ry. The former was changed to standard gage in 1894, and the latter by July 1, 1900. In 1901 they consolidated to form the Maryland & Pennsylvania RR., which at present has 79 miles of line, 14 locomotives, 116 freight, 21 passenger and 2 gas-electric cars. It runs from Baltimore, Md., to York, Pa., 77 miles.

(2) Nos. 4-6, 4-4-0 type, 17x24 cylinders; 23-26, 2-8-0 type, 19x24 cylinders; 27, 28, 4-6-0 type, 19x24 cylinders; 41-43, 2-8-0 type, 22x28 cylinders; 29-30, 0-6-0 type, 20x26 cylinders.

IS Southern Pacific No. 38 still in existence? Who built her and when?—G. C.

Locomotive 38, formerly SP No. 1383, 4-4-0 type, Class E-5, was built by Rogers in Sept., 1883. It is now stored in the SP Los Angeles shops. In 1926 it was renumbered 38, a diamond stack applied and other changes made to give it the appearance of a locomotive built in the Seventies. Then it took part in a celebration held at Lang, Calif., in 1926 in honor of the completion of the SP line between Los Angeles and San Francisco on Sept. 5, 1876. After this celebration it was used many times by motion picture companies in making old-time films. It has 18x24 cylinders, 69-in. drivers, 165 lbs. pressure, weighs 217,000 lbs. with tender, exerts 15,810 lbs. t. f. On this page is a photo with additional information.

WHAT is the difference between Pennsylvania Class K-2s and K-3s?—R. J.

According to official specifications the only outstanding differences between these two classes are their weights and cylinder dimensions: 24x26 cyl-

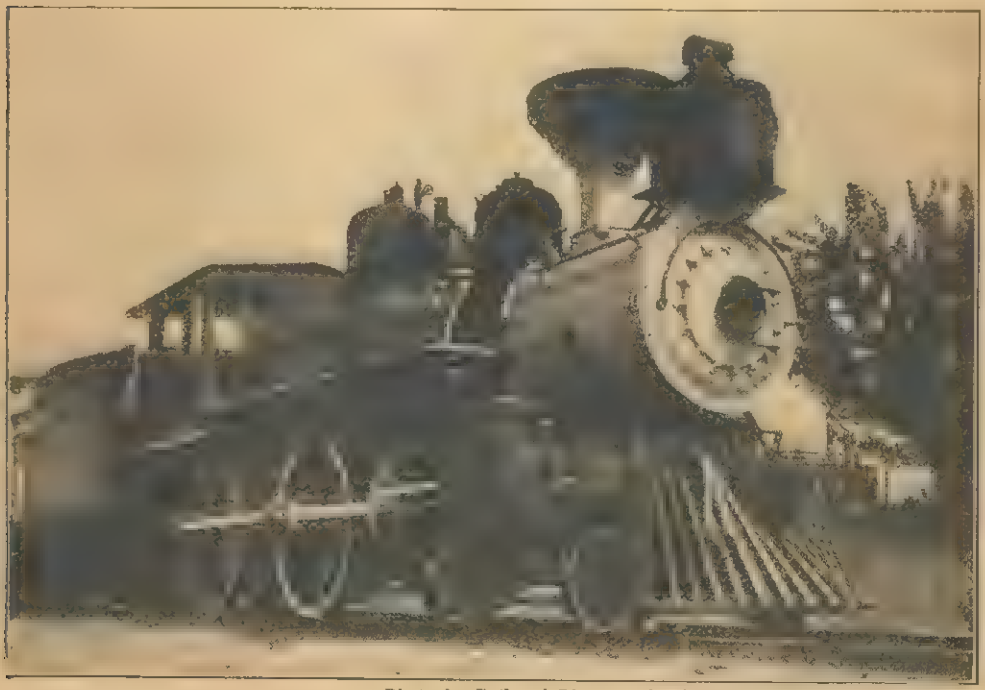
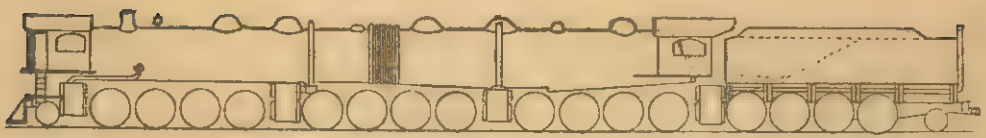


Photo by Railroad Photographs, 5 Appian Way, Allston, Mass.

Southern Pacific No. 38, Old-Time 4-4-0 Type, as She Looked During the Filming of the Movie, "The World Changes." She Represented a Lake Shore & Michigan Southern Engine, and Had the Initials "L.S. & M.S." Painted on Her Tender. Because Her Boiler Was Too Weak to Permit Running Under Her Own Steam, Smoke Was Piped to Her Stack from Another Engine in the Rear. (Specifications and history given above.)



Drawing by James F. Byrne, E. McKeesport, Pa.

Talk About Your Engines! This 8-Cylinder, Double Compound, Quadruplex Mallet Was Designed by Baldwin for the Santa Fe in 1915. It Was to Have a Flexible Boiler to Take the Curves, 27 & 41 x 32 Cylinders, 60-Inch Drivers, 200,000 Lbs. Tractive Force, and Was to Weigh 885,000 Lbs., without Tender. But It Never Was Built

inders and 283,000 lbs. weight for K-2s; 26x26 cylinders and 293,600 lbs weight for K-3s. However, the former have tenders which hold only 7,150 gals. of water, whereas those of the latter hold 8,100, as well as having greater coal capacity and, of course, weighing more. Perhaps the best way to tell them apart would be to note this difference. Do not forget, however, the PRR has a Class K-2sa with practically the same specifications as K-2s, and a Class K-2sb with smaller driving wheels but with the same size tender as K-2s.

A J. P., Winnipeg.—The only standard method of classifying a locomotive is the Whyte system, which groups them according to wheel arrangement. Such designations as D-10, K-1, etc., are not standardized and may refer to a Mikado type on one road and a Pacific type on another. We are printing the Whyte classification on p. 90. A careful study of it will show you why such designations as 4-6-2, 2-6-0, etc., are used.

WHAT was the history of the Plymouth & Middleborough RR?—P. E. B., Freeport, N. Y.

The P&M was chartered in 1890 from Plymouth to Middleborough, Mass., 15 miles. It was opened in 1892, when it was leased to the Old Colony RR. for 100 years. Apparently the P&M used Old Colony motive power and rolling stock. The lease was passed to the New Haven when it in turn leased the Old Colony for 99 years in 1893.

C P., Monterey Park, Calif.—We can find no information about a railroad which ran "from a point about three miles north of Santa Monica for some dozen miles through Malibu, crossing Roosevelt Highway." Perhaps some reader can help you out.

H S. J.—We can find no information about the narrow-gage Alta Tramway, which you say runs from Murray to Alta, Utah.

F N. C., Montreal.—The Eastern RR. (Mass.) was chartered in 1836, completed from Boston to the New Hampshire state line, 42 miles, in 1840. Gradually it grew until it owned 118 miles of line, including 6 branches, and leased 166 miles of branch lines. In 1884 it owned or leased 112 engines, 224 passenger and 2,038 freight cars. In 1883 it was leased to the B&M for 54 years.

GIVE a brief history of the Frankfort & Cincinnati RR.—J. W., N. Y. City.

In 1888 the Kentucky Midland was chartered and two years later was completed. In 1894 it went into receivership. Three years later the Frankfort & Cincinnati Ry. was organized to succeed the KM, but in 1927 the F&C Ry. was sold at auction and became known as the Frankfort & Cincinnati RR. Today it is 41 miles long, has 3 locomotives, 4 cars, uses 56 and 70 lb. rail. On Jan. 1, 1933, it had 56 employees.

W D. S. and M. T.—We are unable to get specifications of MoP 1301, 1440, 1512 and 6404 series.

C W. G., Brooklyn.—Following is color of passenger car equipment on roads you asked about: Missouri Pacific, black; Frisco, dark green; Northern Pacific, olive green; Union Pacific, Pullman green (dark green); Santa Fe, olive green.

C D., Glens Falls, N. Y.—The New York, West Shore & Buffalo was built and completed in 1884, primarily to compete with the New York Central & Hudson River RR. (now NYC) between New York City and Buffalo. It was intended to be a serious competitor of the other road, but went bankrupt, and in 1886 was acquired by the NYC&H itself, which now owns and operates it as its River Division. Early in the history of the "West Shore" it was a link in a Chicago-to-Boston service via the Wabash and Boston & Maine. This service no longer exists.

WHEN did the Erie superintendent Charles Minot first make use of the Morse telegraph system for train dispatching?—E. M. S., Los Angeles.

In the fall of 1851, according to available records.

E. B.—Erie freight train No. 87 maintains an average speed of 32.4 m.p.h. between Jersey City and Buffalo. Thus it certainly is not faster than "any NYC train between New York City and Buffalo."

E. E., Saskatoon.—According to H. Cotterell, 808 South Orange Ave., Newark, N. J., the Lehigh Valley's Pacific type No. 2035, built at its Sayre shops in 1921, uses the Young valve gear.

J. W.—The Georgia Northern 105 series, 2-8-2 type engines have 20x28 cylinders, 57-in. drivers, 200 lbs. pressure, weigh 189,470 lbs. without tender, exert 33,400 lbs. t. f.

See answer to A. M. for your question about Great Northern Mikado types.

The all-aluminum Pullman car, illustrated on page 47 of our Oct., 1933, issue, weighs 96,080 lbs., a little more than half the weight of a steel car. Its 4-wheel all-aluminum trucks weigh 13,750 lbs. each, whereas the trucks on steel Pullmans weigh 23,750 lbs. each. This is the first time in 60 years that a regular Pullman car was built with less than a 6-wheel truck. The car is entirely finished in aluminum, is gold striped and is equipped with an air conditioning system. It is decorated in a simple modern style.

F. D. C., Temperance, Miss.—We can get no specifications on engines of the Bay Terminal, Lorain & West Virginia, Toledo Terminal and Wheeling & Lake Erie. Perhaps some reader can help us out.

R. W. E., Reading, Pa.—The United States Navy has 92 steam locomotives, about 15 of which are 6-wheel switchers, and the rest 4-wheelers. It also has some electric and oil burning engines. For details write to the Bureau of Yards and Docks, U. S. Navy Dept., Washington, D. C.

Reading Class G-1a, Nos. 105-134, 4-6-2 type, has 25x28 cylinders, 80-in. drivers, 220 lbs. pressure, weighs 273,600 lbs. without tender, and exerts 40,900 lbs. t. f.

D. R.—SP Class C-2, 2-8-0 type, Nos. 2600-2611, built by Schenectady in 1899-1900, has 22x34 cylinders, 57-in. drivers, 190 lbs. pressure, weighs 347,300 lbs. with tender; Class F-5, 2-10-2 type, Nos. 3718-3768, Baldwin 1924, has 27½x32 cylinders, 63-in. drivers, weighs 640,200 lbs. with tender, exerts 86,120 lbs. t. f. with booster. Class M-9, 1804-1822, 1826-1830, 1836, 2-6-0 type, has 21x28 cylinders, 63-in. drivers, 210 lbs. pressure, weighs 322,400 lbs. with tender, exerts 34,990 lbs. t. f. Class M-9 engines were built by the SP, Baldwin and American in 1918, 1909 and 1908. Class MK-6, 2-8-2 type, Nos. 3250-3269, Lima 1914-1915, has 26x28 cylinders, 63-in. drivers, 210 lbs. pressure, weighs 479,300 lbs. with tender, exerts 53,630 lbs. t. f.

Northwestern Pacific No. 181, 4-6-0 type, was built by Baldwin in 1922. It exerts 36,830 lbs. t. f.

A. S.—D&RGW 1500 series, 4-8-2 type, exert 66,640 lbs. t. f., 78,967 lbs. t. f. with booster. NYC No. 2471, 4-8-2 type, exerts 60,600 lbs. t. f., 73,280 lbs. t. f. with booster. CB&Q No. 7017, 4-8-2 type, exerts 52,800 lbs. t. f. A booster on it would exert about 11,000 lbs. additional t. f.

M. M., Brooklyn.—England's largest and most powerful passenger locomotive is the new 4-6-2 type, "Princess Royal" class, of the London Midland and Scottish. It weighs 355,300 lbs. with tender. We have no specifications other than that it is a 4-cylinder engine.

Among the largest and most powerful English freight locomotives are the Beyer-Garatt 2-6-0—0-6-2 types of the LMS, which have 4 cylinders, 18½x26 inches, 63-in. drivers, 190 lbs. pressure, weight 152½ English tons (341,600 lbs.).

WHAT is a good book on Canadian railroad history?—L. P.

The Macmillan Company, Limited, of Canada, Toronto, has just published "Canadian Railway Development" ($4.00) by Norman Thompson and Major J. H. Edgar. It goes into the history of Canadian roads from the earliest times. The Champlain & St. Lawrence and other early projects are taken up in detail, and then the account proceeds to the Great Western, the Grand Trunk, Intercolonial, Canadian Pacific, Canadian Northern, Grand Trunk Pacific, Canadian National, miscellaneous Dominion railways and U. S. railways in Canada. Although these divisions contain a great deal of historical material, they are by no means dry or uninteresting, but are interspersed with anecdotes and stories which will prove fascinating to anyone. By and large, the book gives a vivid picture of Canadian railroad history, which epitomizes the history of Canada itself. It is illustrated with several photos of Canadian locomotives, but it contains no maps.

"THE TALLOWPOT'S RETURN," by Charles A. Roach in January RAILROAD STORIES—on Sale December 1st

Photo from A. A. Stafford, Carson City, Nev.

After a Hard Day of Fighting Snow on the Virginia & Truckee 21 Years Ago The Locomotives Are Nos. 18 and 27

THE ROMANTIC VIRGINIA & TRUCKEE

BACK in the hell-roaring days of the Comstock Lode, when the state of Nevada was echoing with the magic cry of Gold, and the West was the Golden West, a group of men got together to promote a railroad between Virginia City and Carson City, Nevada. A railroad was such a necessity that it, too, would prove to be a veritable gold mine if it were built.

They drew up their plans early in 1868, but it was not until February 18, 1869, that work was actually commenced. With construction crews working from both ends, it was completed in nine months. Very soon it was one of the richest pikes in the world for its size. Hauling supplies for the rushing mining camps of Virginia City, Gold Hill and Silver City, as well as for smaller towns on the line, gave it more business than it could handle. It was completed into Reno in 1872, and there connected with the Central Pacific (now Southern Pacific).

In the early 1900's during the first years of the mining boom in southern Nevada trains were run by traffic agreement from the Central Pacific over the Virginia & Truckee track from Reno via Carson City and Mound House to Mina, where they were taken by the Tonopah & Goldfield R. R. to Tonopah, Goldfield and way points.

Later the Southern Pacific built its own line for this service and business dropped to a low ebb on the Virginia & Truckee. For a number of years this hitherto prosperous line has been operating in the red.

Engines Nos. 1, 2 and 3 were built by the Union Iron Works of San Francisco, and were hauled overland from the Central Pacific in California to Carson City. Most of the later locomotives were built by the Baldwin Locomotive Works. Number 11, the next oldest locomotive, is still in service, and in April, 1933, pulled the special train bearing former President Hoover and Ogden Mills on their tour of the Comstock and other points on the Virginia & Truckee. Engineer Jim Savage was in charge of the famous No. 11, and Jim Costello was conductor. The company at present has nine serviceable locomotives and operates sixty-six miles of road, although it finds use for but three or four of these under present traffic conditions.

Mills recently became the sole owner of the road by the purchase of all the outstanding stock, having inherited the controlling interest some years ago from his father and grandfather, D. O. Mills, one of the builders. It is now an assured fact that the famous old railroad will continue to operate as of yore.

Some of its employees have been with it more than 50 years: Engineer James Savage, Master Mechanic Charles Rulison, Conductor James Costello, and Master Painter Joseph Castle. They have seen gold booms come and go; perhaps there is another one in store for them, and perhaps the V. & T. will throb with the rhythm of moving trains again.—A. A. Stafford.

Complete in This Issue

Rattlesnake Mountain

By E. S. DELLINGER

Ex-Brakeman; Author of "Washout" and Other King Lawson Novelettes

THE biggest fight in railroad history was on. It started when Dynamite Dan Ravelstone, who was the V. R. M. & E., and Old Man Harvey, who was the C. & S. L., secretly gained control of the Rattlesnake Mountain, a narrow gage logging line in the Canadian Rockies, and started to make a main line of its 118 miles of crooked, rusty steel.

King Lawson, the boomer, and his boomer wife, Millie, got into the fight when Harvey sent him north to run the old logging line for Ravelstone.

"It's a helluva job I'm sending you to, Lawson," Harvey told him "And a helluva fight. That old Rattlesnake Mountain's a mess. No track, no rolling stock, no power, boomer personnel. It's going to be your job to make a railroad out of it and keep it open.

"It ain't going to be sweet; Ravelstone and me ain't kidding ourselves a bit. The Atlantic Western crowd and the Great Lakes Pacific crowd don't want this new line built. They ain't going to let it be built if they can help it. When we start building, they'll start tearing down. They're going to start right around Devil's Gateway an'

Lawson Fired as a Figure Reeled Out of the Burning Station

Sleepy Valley, and they won't balk at anything short of murder. Now, we need a *man* in Sleepy Valley. I'm sending you!"

Lawson had always got along with Old Man Harvey. He didn't get along with Ravelstone. Very first meeting, Dynamite Dan had pointed a grizzled goatee and a skinny finger at his middle, glowered over a pair of horn-rimmed spectacles, and said a lot of things Lawson didn't like.

Standing now with feet outspread, beside his private car in Devil's Gateway, thumbs tucked in the armholes of a checkered vest, he was repeating some of them in terms which left no doubt.

"I told you you was too young for this job, Mr. Lawson," the old man was raving. "Didn't I tell you that, Mr. Lawson? Didn't I tell you we was building a railroad here? And didn't I tell you we was boring two tunnels through the mountains. Being division superintendent, maybe you hadn't heard about Eagle Nest and Big Spiral."

"Yes, but—"

"Or maybe you thought we had a lifetime to do this job in? Or maybe you thought my contractors could go right on working twenty-four hours a day without supplies to feed their men on, or no tools to work with, or no dynamite to blast down rock."

"No, but—"

Ears burning like a school kid's caught throwing paper wads, Lawson was shuffling from one foot to the

other, trying to break in and explain why yesterday's supplies had not gone through.

He wanted to explain that Pug Horan, biggest crook that ever went railroading, was in Devil's Gateway, supposedly in the employ of the Atlantic Western. That Pug had been busy, that he himself had come over to Devil's Gateway to outwit Horan and see that the six cars of stuff now in the yards for Big Spiral were sent through without delay.

That and more he would have explained, but Ravelstone had no time to listen.

"Mr. Lawson, there was five cars of stuff stood in this yard last night that should have been in Sleepy Valley this morning. Did you know that? If another car of supplies for them contractors is ever laid out in this yard, I'm taking no excuses. None whatever. I'm going to bundle you up in a baby blanket, send you back to Old Man Harvey to make a man out of. Do you understand, Mr. Lawson? This stuff for these contractors has got to be got through to them on time."

Number 5, with Mr. Ravelstone's private car on the rear, was beginning to move. The old man was holding to the handrail.

"But, Mr. Ravelstone—"

"Good-by, Mr. Lawson. An' don't forget a damn word of what I told you."

The private car curved out of the switch and disappeared in a swirl of dust toward the northwest. King Lawson watched it go.

HE did not watch long. An hour ago he had given a short-fingered roundhouse foreman orders to get an engine out for the Sleepy Valley local at once. It should be on the train by this time. (Incidentally, train orders in Canada are issued on the basis of a twenty-four-hour day—not a twelve-hour-day, as in the States.)

Turning angrily from the V. R. M. & E. tracks, Lawson strode the four blocks to Snake Mountain Station. He did not see a bulky figure, dressed in checked suit and brown derby, saunter casually out of sight at his approach.

He did see the combination coach-caboose of the local on the main line. Two traveling men, evidently passengers for the local, were standing under the eaves; a young lady was pacing the platform.

If Lawson had not been in such a hurry, he might have noticed that she was a decidedly attractive young lady with black hair, and blue eyes which smiled at him, and that she was wearing a serge traveling suit which set off her slender figure and gave it a decided air of grace.

But Lawson was a married man. He was also in a hurry. Looking beyond the caboose, he had seen seventeen freight cars. There was no engine beyond. With an oath he fairly hurled himself over the coupling and struck out for the roundhouse to find out why.

After he had gone the young lady leaned against the caboose, directly under the cupola where Conductor Holm and Brakeman Nelson were talking. She paid little attention to their conversation.

After a while the bulky figure in the checkered suit came from hiding and entered the caboose. She gave it a keen scrutiny. A moment later, she felt the car rock as a body swung up into the cupola.

"Have a smoke, boys?" she heard a heavy voice say.

She did not hear their answer, but

presently the odor of good cigar smoke was filling her nostrils. Soon she heard them talking.

"Reckon you birds'll get into Sleepy Valley tonight?"

The coarse voice was guarded. She listened.

"Reckon we will," drawled the conductor. "Brass hat says we gotta get this stuff through by six A.M. An' he oughta know."

"Would you be disappointed if you didn't?"

"Did you ever see a train crew disappointed at gettin' overtime?"

She heard three men laugh. Then the heavy voice lowered still more. She had to listen closely to hear what it said. She could not hear the others at all. Soon the man in the checked suit and brown derby left the caboose, and went sauntering away toward town.

LAWSON went straight to the roundhouse. The walk cooled down his anger. He knew he must use diplomacy. He had come to this job a few weeks ago. He had superseded Pug Horan, who mixed booze with his railroading, and who had run the job for the lumber company.

Lawson had found a lot of hard-boiled boomers, and a few homeguards on the job. One and all they had resented him. They showed open hostility or cold contempt for him personally, and for the discipline which he tried to impose. Within the month he had fired half of them, and hired others a little less hard.

In one glance, he took in the situation in the roundhouse. He had ordered an engine. There were only three narrow gage locomotives in Devil's Gateway. One of them had been ordered out of service for an overhaul. A crew was working around each of the other two, and they were both cold as stone. He found the foreman puttering about the 621.

"Which one we getting on Number 23, Mac?" he asked, as calmly as he could.

"You're gittin' the 621 when it's ready," Mac growled.

"Why ain't it ready?" snapped Lawson. "Didn't I tell you two hours ago I wanted it out at once?"

"I ain't making engines on call, Mr. Lawson," replied the foreman. "This damn air pump's on the blink, an' the hoghead won't take it out till it's fixed."

"We ain't going to lay out this local today, holding it for an engine like you did yesterday, Mac. This stuff's got to be in Sleepy Valley by six A.M. Hurry up and get that air pump fixed."

"I'm hurrying, Mr. Lawson."

The foreman wiped his hands many times on white waste. When they were clean, he went to the drinking fountain, and then to the office, and when he came back he stopped to light a cigar. Finally he returned to the 621, and set to work helping pack the air pump.

Lawson spent the next two hours rushing from the roundhouse to the station and back again. The drummers were sitting under the eaves telling stories. Conductor Holm, Brakeman Nelson, and Engineer McDougal were loitering on the platform. The young lady was there, too.

Twice she came toward Lawson, as if she would speak with him. He thought she was trying to flirt. He had no time for that. He turned abruptly, and went about his task, trying to get the Sleepy Valley local out of Devil's Gateway.

At 8.15, the engine was coupled on, and Conductor Holm came with the flimsies.

"You want to watch things tonight, hoghead," Holm yelled up at the engineer. "We're ten hours late. We're haulin' drummers, dames, an' dynamite. The new brass hat says we gotta be in Sleepy Valley by six A.M., an' he oughta know, because he's goin' to ride the rear."

"To hell with the new brass hat," was the answer.

A DOZEN feet away, across a cut of standing cars, the new brass hat was in the act of crossing a coupling. He had been to the roundhouse for a few last instructions to the foreman.

He itched to cross the coupling, and let the crew know he had heard them. Remembering similar remarks he himself had made about other brass hats when he had been a boomer, he waited until Holm started back to the caboose, and McDougal had the hog moving. Then, smiling, he crossed the coupling and waited.

He was still smiling when he caught the rear of the combination coach-caboose. Holm and Nelson were inside. The lady passenger was standing on the platform, holding to the upright ladder. As he started in the door, she laid a hand on his arm.

"Are you Mr. Lawson?" she asked in a soft voice.

"Yes." He wondered. They didn't often make breaks like that.

"I heard something a few moments ago that I thought you ought to know," she said.

"Oh!" Lawson stepped up beside her and caught the railing. She glanced into the caboose to see whether the men were watching. Then she leaned close to him.

"A man came into the car awhile ago and talked to the trainmen."

"The crew?"

"Yes. He told them it would be worth money to him, if this train didn't get into Sleepy Valley before tomorrow night. He told them there would be twenty dollars apiece for them if it didn't."

"Is that so? What kind of looking bird was he?"

"He was a big fellow, ugly as sin, and wore a checked suit."

"Must have been Pug Horan."

"They called him Pug."

Lawson was silent for many seconds. The unsteady cough of the 621 drifted back to him. He had known Holm and Nelson were hard and reckless. He had not thought they would stoop to sell out to a guy like Horan. He could scarcely believe it.

"Did you hear what the men said?" he asked.

"No. I couldn't hear. The man didn't stay long after he propositioned them."

"Thanks, Miss."

Lawson went through the coach into the caboose. Holm was at the desk writing. He was smoking a good cigar. Nelson was sitting up in the cupola. He was also smoking a good cigar. Lawson wondered about them.

He wondered about the young woman, too. He wondered why she had taken pains to tell him of the attempt to corrupt his helpers. Being too polite to ask, he kept on wondering. He decided to watch Holm and Nelson.

The Affair in Rattlesnake Pass

THE run that night was a hoodoo. They stopped at Golden to pick up the helper engines. The train

started, but it did not move far. When it was running ten miles an hour, something happened up ahead. The air brakes went into emergency and sent the two traveling men, who were asleep on the lockers, headlong into the wall.

Lawson hurried over to see what was wrong. The brakemen, Holm, and the three engineers were standing at the third car back. Scrap was scattered over the right-of-way.

"What's the matter over here, fellows?" demanded Lawson.

"Hoghead's lunged one pullin' out," informed Holm.

"Too much power fer the drawbars, Mr. Lawson," apologized the little Scotchman.

They didn't seem to be particularly worried. McDougal was lighting a cigar. The others were beginning to pick up pieces.

"Nelson, you an' Jarvis go back to the crummy an' git the chain," Holm told his brakemen. "We got to git this junk off the main line an' git goin'."

"What yuh going to do with it?" queried Lawson.

"Set it over in the sidetrack an' leave it," growled Holm.

Lawson glanced at the lading. It was tools and machinery for Big Spiral.

"We can't leave this stuff here, Holm," he said. "We'll take it with us behind the caboose."

"We never take 'em behind the crummy with a front lung out, Cap," drawled Holm.

"We're taking this one," declared Lawson. "It's got to be in Sleepy Valley by six A.M.

"We fool around out here chainin' up drawbars, we won't any of us be in Sleepy Valley by six A.M.," Holm grumbled.

"Quit fooling and get down to business, then," snapped Lawson. "Don't be all night chaining up this boxcar."

Holm said no more. Lawson watched him bind it up and shove it into the passing track. Holm then backed the caboose in against it, and chained it on behind. Lawson observed that the men took their time. It was 9.45 when they left Golden. A summer storm was coming up.

While they were chaining up the car, the lady passenger, evidently tiring of the cushions, had climbed into the cupola. She was sitting by the open window when the crew came in.

None of them told her to move. Spike Nelson climbed up in the seat facing her. Lawson and Holm climbed up on the other side. Spike Nelson wasn't as polite as Lawson. He asked her what her name was.

"Ollie Oleson," she said sweetly. "You see, I'm a Swede hoghead's daughter!"

That seemed to satisfy Spike. He spent the next half hour trying to get a date with her. He didn't have any luck. Lawson, watching in the dim light of the cupola, tried to figure out who she was.

THE road from Devil's Gateway to Sleepy Valley was a he-man pike. It was fairly stuck on the side of the mountain, with seven trestles more than 200 feet high, and a grade that made even boomers sit up and wonder. From a dozen points on the pass, they declared, a man could spit out of his cupola window and into the chimneys in the village miles below.

On the way up, Spike Nelson, who was full of good humor, told a tale of a train which had got away from its crew at the top of the mountain in the old days.

In an amusing way the brakeman elaborated, for the benefit of his lady passenger and the attentive brass hat, on the horrors of that ride, and the untimely end of the men who made it.

Holm helped him spread it on thick. They kept right on yarning all the way up the hill. The helper engines cut off, and McDougal started letting the seventeen cars down Rattlesnake Mountain with the one teakettle. King kept watching the air gage, noticed it was taking a long time to pump up the pressure when Perry relaxed the brakes.

Holm and Nelson quit telling stories. Nelson took a club and went out on top of the train. The head brakeman was also out. Holm held a club between his knees, ready to start any minute. Lawson lighted a lantern and found another brake club. The girl watched them curiously.

"Is something wrong?" she queried.

"Nothing we can't handle," assured Holm.

As they started down into Spruce Grove, McDougal sounded a call for brakes. Lawson looked at the air gage. Holm slipped quietly down and began setting the caboose brake. Lawson swung out on top and commenced clubbing down the others. They stopped between the switches at Spruce Grove, and the men all went to the engine.

"What's the matter with her, Perry?" asked Holm.

"The air pump's went haywire," growled the hogger. "She's blowin' like hell an' won't pump up the train line."

"That's funny," Lawson remarked. "They worked that pump over in the roundhouse this evening."

"Them nutsplitters don't know nothin' about fixin' uh air pump," scoffed McDougal. "They couldn't—what the hell—" He was rubbing a bit of grease between his fingers.

"What's wrong?" asked Lawson.

McDougal extended pieces of packing to him and Holm. It was filled with fine particles.

"Emery dust!" muttered Holm.

"Help from our friends," growled Lawson.

"What friends?" queried McDougal.

"The Atlantic Western crowd. They don't want this new railroad built. They're trying to hold up the work by laying out our trains. We've got an important shipment for Big Spiral. If it don't go through, we lose a day on that tunnel."

"That's tough," Holm stated.

LAWSON glanced at him quickly. Holm looked down his nose.

"We're stuck here for the rest of the night," said McDougal. "You might as well go back and go to bed."

"We can't," growled Lawson. "We've got to get this train to Sleepy Valley by daylight."

"We can't go down without air," protested Holm.

"We've got some handbrakes, ain't we?" rasped Lawson.

"Yes, but—"

"We've got some clubs. We'll let this train down into Sleepy Valley like they used to in the good old days you boys was telling about in the crummy tonight."

Holm flushed. Spike Nelson stepped back.

"You ain't going to send me out on no train holding it with handbrakes down Rattlesnake Mountain, Mr. Lawson," he said.

"I ain't going to *send* you. I'm going with you."

"You mean you're goin' to help us?"

"I ain't scared, Nelson. McDougal, you might as well get ready to ride. We're going down. Holm, you check up on these handbrakes, and see if they're in good shape."

"I ain't goin', Mr. Lawson. My rule book—"

"Dispatcher's orders is superior to rules, Mr. Holm," informed Lawson. "If you want an order—"

"I ain't goin', Mr. Lawson," spoke up Nelson. "I'll stay at the switch, an' quit first."

"You spoke a mouthful," agreed the conductor. "I ain't taking no chances on ditching a train an' killing a crew an' a lot uh passengers because some tinhorn official—"

"You've said enough, Holm." King Lawson's voice was cold. He stepped forward to face the big conductor.

"How much money did Pug Horan offer you to keep this train out of Sleepy Valley tonight?" He shot the question quickly.

"Why uh—why—"

"Out with it, Holm. How much?"

"I ain't saying," Mr. Lawson.

"You ain't denying he offered it?"

Nelson and Holm cooled off a trifle. Perry McDougal's face was a study.

"What's that?" he queried.

"Pug Horan's paid by the Atlantic Western to keep trains from running on schedule. He went to the caboose to see Holm an' Nelson this evening."

"Lissen here, Mr. Lawson." Holm had squared his shoulders and was facing his superintendent. "Pug did come into the caboose this evening with a little proposition. But Nelson an' me ain't no mudheels like that. We told him to go to hell. Didnt we, Spike?" He turned to his brakeman.

"We sure did, Mr. Lawson. We ain't saints, but we wasn't taking no money for a rotten deal like that."

"I'm glad to hear it, boys," drawled Lawson. "Now the best way to prove it's to back me up in getting this train down the hill before morning. What about it, Mac?" He turned to the engineer. "Do you go or stay?"

"Goes with me," laughed the Scotchman.

"Me, too!" chimed in Jarvis, the head man. "A gang can't pull a stunt like that on the railroad I work for."

"Holm, what about you and Nelson? Are you going to work for me? Or for Pug Horan?"

"You know damn well who I'm workin' for, Mr. Lawson," growled the conductor.

"All right, let's go."

Lawson did not tell the men how to do their job. He reckoned they knew. Jarvis took the four cars behind the engine. He took the next four. Spike Nelson took the four behind him, and Holm had the four rear ones and the caboose.

Perry McDougal used steam to start the cars, and as they crossed the switch at Spruce Grove, each of the four men set club to spoke, tightening brakes to hold the cars from getting away. Slowly, methodically, they worked their way down the crooked miles, setting three brakes, releasing one to cool the shoes and wheels, setting the cool one and releasing another.

The storm which had been brewing in the west closed in. Mad winds sent leaves and twigs tossing about.

Lightning flamed in the mountain sky. It played up and down the shining rails, weaving back and forth across the face of Rattlesnake Mountain, and shimmered above the tall spruce trees reeling before the wind. Rain came, and hail pelted the four

men who were letting the train down the mountain grade.

It was 2.40 when they left Spruce Grove. It was 4.41 when they eased into the Sleepy Valley yard. The dispatcher met Lawson in the door of the office.

"Mr. Ravelstone just wired from Queen City, Mr. Lawson, inquiring if you had got the cars into Sleepy Valley, and if you had had trouble."

"Tell him we got the stuff here before six A.M., and that we didn't have no trouble. We was just lousing along in the rain, letting that drag down the hill with handbrakes to see if it could still be done."

"Shall I tell him that, Mr. Lawson?"

"I'd tell him a damn sight more'n that if he'd quit talking long enough to give me a chance."

Lawson saw the young lady who had given him the tip come to the station for a moment. She called a taxi and went uptown. He did not see her again for several weeks. He reckoned she had passed out of his life just as suddenly as she had come in.

Lita Ravelstone

IT seemed as if the affair on Rattlesnake Pass that night was the signal gun for a series of setbacks to the building program. Materials coming in over the Atlantic Western were delayed and sometimes never delivered. A cache of powder exploded up at the tunnels, blocking work for a week. Little things kept happening constantly.

Lawson investigated the men, and Ravelstone investigated Lawson. But King went right ahead building up his organization. He brought in new power from the C. & S. L. narrow gage in the States. He had the roadbed keyed up to stand the new traffic. He hired additional forces, and kept them working.

Busy at the office, he had little time for home and family. Consequently the boomer wife whom he had brought north with him soon became restless and uneasy. She had been an operator in the old days.

"I want to get back into the game," she told him one night.

"Back into the game?" King frowned. He knew his boss didn't approve of women railroaders. "Haven't you had enough rawhiding around a railroad?" he asked.

"Rawhiding around a railroad?"

"Yes. I think you'd be sick of it."

"Once a railroader, always a railroader, my dear," she reminded. "It's in the blood."

King did not give his consent, but while he was building up his own organization for the train service, which was his specialty, his chief dispatcher hired Millie and sent her out to handle the daylight trick at Big Spiral, the focal point of construction.

In the fall an inspection party composed of Mr. Harvey, Mr. Ravelstone, and some of the directors came through looking over the work. Since Lawson was to act as host, he took the ancient narrow gage business car, had Millie go with him, and met the party in Devil's Gateway.

The group from the States arrived first, and since the Lawsons had known Mr. Harvey quite intimately on the C. & S. L., they met him at the station.

"How are you and Dynamite Dan Ravelstone making out, Lawson?" Harvey asked.

"Oh, so-so, I reckon," drawled King.

"Ravelstone's a mighty fine chap," mused the C. & S. L. man. "I've worked with him first and last for more than fifty years."

"Yeah?" Lawson's jaw was hooked back.

"Yes," the old man nodded. "We worked together on a Pennsylvania section when we was kids."

They spoke of days on the C. & S. L., and the time they had been snowed up in the Aspen Gorge. Suddenly Harvey broke in with the question:

"By the way, have you folks met Lita?"

"Who's Lita?" queried King.

"Lita Ravelstone. Old Dan's foster daughter."

"Haven't had the pleasure, Mr. Harvey," drawled King.

"I *thought* you had." The big shot glanced keenly at his helper. "Quite an interesting character, Lita is. Her father used to be an engineer on one of Ravelstone's western pikes. Got caught in a slide several years ago. Dan took her under his wing, and from all accounts, he's been scratchin' brimstone ever since."

"That's too bad," sympathized Millie.

"Yes, it is. I hear she's quite interested in this new construction, and in Sleepy Valley. Coming over this morning with her father."

"Is that so?" Lawson didn't look pleased.

"Yes." Harvey turned a drooping lash to Millie. "You better keep your eye on your husband while she's around, Mrs. Lawson," he advised.

"I'm awfully worried, Mr. Harvey."

"I'm warning you, Mrs. Lawson." Harvey was jesting again.

RAVELSTONE'S party soon came in. Dynamite Dan performed the introductions. Interested in the creature whom Mr. Harvey had described, Lawson glanced about for a feminine figure. But Lita Ravelstone did not appear until the party was almost ready to board the narrow gage for the trip inland.

When she floated out to the rear platform, King's mouth opened. A flush mounted to his bronzed cheek. Lita Ravelstone was the lady passenger who had ridden the local that night of the trouble! She was the girl who had tipped him off as to the activities of Pug Horan. She was the "Swede hogger's" daughter.

Mrs. Lawson and Harvey watched the two. When Ravelstone introduced Lawson, Lita smiled and advanced with outstretched hand.

"I believe Mr. Lawson and I know each other," she said sweetly. "How-do-you-do, Mr. Lawson?"

Harvey smiled knowingly. Mrs. Lawson did not smile. Something seemed to grip her heart in mid-beat. She was glad when the tension broke and the party was in her husband's car bound for Sleepy Valley.

During the afternoon they went over the new construction between Devil's Gateway and Sleepy Valley. Lawson was out with them. Lita and Mrs. Lawson lounged about the car, reading, or chatting of trivial things. Mrs. Lawson wondered. Lita made no explanations.

Arriving in terminal, King had work at the office which kept him busy until almost midnight. He was preparing for the trip to the two big projects, Eagle Nest Tunnel and Big Spiral.

When he reached home, Millie had not slept. Briefly he explained about the first meeting with Lita Ravelstone.

"I had no idea who she was," he said. "And bullieve me, I sure did feel funny today."

"And bullieve me, you sure did look funny, big boy!" laughed his wife, content with the explanation.

Lawson and Millie remained awake for a long time. They discussed Ravelstone, Lita, and the inspection party.

AND while they slept, another conference was in progress in the spruce grove behind the power plant at Big Spiral.

Pug Horan, having been east and back many times, had returned that morning to Sleepy Valley. He had registered at the hotel, and played pool most of the morning. That evening he had caught a freight up from the terminal and got off when it stopped at Big Spiral tank. No one knew he had been on it.

Now he was leaning against a young spruce tree, watching the electric lights to the south. Eight were strung along the temporary bridge across Bear Canyon, one over the platform in front of the station, and two at the ends of the power plant.

Pug surveyed this power plant critically. It was an important unit in the construction program. Within the frame structure one of its three engines was making juice for the construction gangs, who worked twenty-four hours a day in two mountains.

Pug quit looking at the power plant, and turned back to one of the two overalled figures who had come slinking away from the camp to meet him an hour ago.

"We want some action up here, Scorchy," Pug was saying. "We want you birds to show results. That's what we're payin' you for. We want this damn works shut down so tight it can't turn a wheel for a month. An' you birds has got to do it."

"But we can't—"

"You can! And what's more you're goin' to. Git fired off the lousy job. You've got all the dope you come for. Git fired off it an' gum the works. Mord, you promised—"

"But we haf been try, boss."

"Been tryin' hell! Quit tryin', and do somethin'. Before the day's done tomorrow, git fired. I don't care what for. Lick the foreman. Hurt somebody! Git drunk! But git fired before the day's done, an' then do what you come to do."

A freight train bound for Sleepy Valley whistled off. Pug Horan left his two henchmen standing in the spruce grove, and hurried down to the tracks to catch it.

"Mord" and "Scorchy"

THE inspection party arranged to go over lower Bear Canyon next morning. Mrs. Lawson had been called to her trick at Big Spiral, while Lita Ravelstone went with her father.

All the preceding day Ravelstone had appeared anxious to get away from Lawson. This morning, when they left the train, he turned to Lita.

"Daughter," he said curtly, "I'm going to turn you over to our genial young superintendent today." Lawson looked up. Dynamite Dan was grinning.

"Mr. Lawson," he continued, turning to King, "you can best serve the interests of this company by seeing that Miss Ravelstone doesn't fall over a cliff, or get herself blown up."

Harvey nodded to King, winked sly-

ly at Lita. The girl fell into step beside him.

They spent the forenoon in the lower canyon, working gradually upstream. The floor was a scene of activity. From the point where the Big Spiral Tunnel emerged, carrying the tracks down alongside the gorge, men with compressed air drills were boring holes into the mountain and filling those holes with charges of explosive.

Here and there, other men in khaki were cautiously setting up transits, or creeping along projecting ledges with tape and rod. At one point, utterly inaccessible from below, two men in a basket slung from the top of a crag were drilling a hole with a hand drill. And only a short distance below, a car running on a cable stretched from the base of the cliff on the right to a steel peg in the rock wall on the left carried other men to blast out ledges in the side of the mountain.

While the men looked on, Lita Ravelstone took in every detail.

"It's marvelous! Wonderful!" she exclaimed once, laying a hand on his sleeve and pointing across the gorge, where a survey party crawled along a cliff, a hair's breadth from eternity. "It fairly thrills me to see the chances these men take—and the results which they obtain."

"Yes," muttered Lawson. "They're there with the goods."

It was a silent party which at 10.40 left the lower canyon for the climb back to their train, now on the old logging road, 500 feet above. It was as if that trip had awed them—even Dynamite Dan Ravelstone and Old Man Harney.

Shortly before noon their train backed into a spur siding at Big Spiral. It was the point at which the old logging road crossed the new grade. It was one of the busiest stations on the division. It was here that supplies for Big Spiral Tunnel, a short distance below, and Eagle Nest Tunnel, nine miles above, were unloaded.

It was the headquarters for the men who worked on the lower tunnel. It was also the site of the gas-electric power plant, which furnished juice for running the air compressors, the ventilating and pumping systems, and the lighting system of the construction.

Here it was, too, that Millie Lawson, much against the will of her husband, had become first trick operator, handling the key during the eight busiest hours of the twenty-four.

ARRANGEMENTS had been made for the party to have lunch that day in the mess tent of the construction gang. Loui Rael, general foreman of the Big Spiral project, acted as host. He introduced Mr. Ravelstone and Mr. Harvey. Both builders spoke briefly, explaining the need for haste in completing the job, assuring the men that the success of the project lay with them. Hearty applause was the response.

After listening a while, Lawson and Lita went to the station. Lawson's wife was standing on the platform, complacently whirling two hoops containing orders for a freight train coming down the narrow gage.

Lawson took one hoop from her and handed it to the fireman, who was standing in the gangway. The train rolled by. He handed the second hoop to the conductor on the caboose platform. As the train disappeared around the curve, Lita Ravelstone turned to Millie.

"Do you work here all day alone, Mrs. Lawson?" she queried.

"And sometimes all night," returned Millie with a smile.

"Her old bear of a husband insists that she earn her keep," informed King.

"Nothing of the sort," denied Millie. "I love it. I love the roar of the water falling into the gorge. I love the boom of the explosions as the men fight their way into the mountain. I could never be happy without it."

Lita Ravelstone listened.

"It's marvelous to be free, Mrs. Lawson," she said in a subdued voice. "Free as you are to work and strive and take part in what goes on about you. Always I've longed to work like other beings, to do things, to be more than a cheap ornament.

"My mother worked for a living," she continued. "My father ran an engine over the first rails laid in the province of Alberta. I wish I were a worker, too." There was a tear on her cheek when she finished.

By this time the officials had come down from the mess tent. Old Man Ravelstone heard what his daughter said.

"That's all right, Lita," he replied. "Really, I think you should feel yourself fortunate that you do not have to work for a living. Woman's place is in the home." He shot Lawson and Millie a suggestive glance.

"Railroading is a man's job. I really think, gentlemen," he turned to the Toronto directors, "I really think we should exclude women from employment on our lines in any capacity whatever."

King Lawson's face was crimson. Millie's was pale. Lita was biting her lip. Smiling grimly, Harvey was staring down Bear Creek Canyon.

Ravelstone's grizzled goatee was pointing straight ahead. Headed toward the Big Spiral, it led the way toward the new structure. Here all was confusion—confusion out of which was growing one of the most unusual structures ever planned by the brain of man.

The old logging road had come down into Sleepy Valley from the southeast over Eagle Nest Pass. It had followed Snow Creek in a series of switchbacks to an altitude of almost 7,000 feet. Thence it had come down another series of switchbacks to the right side of Bear Creek Canyon.

The new survey followed Eagle Creek up from the plains to the southeast to the falls, plunged through the backbone in a three-mile tunnel to the upper falls of Bear Creek, and followed the valley nine miles on an easy grade to the lower falls.

At the lower falls, at Big Spiral, Bear Creek took a mad plunge straight over a 200-foot escarpment into the gorge. By herculean efforts, the engineers knew they could blast out a footing in the gorge, and carry their rails out to the ever-broadening valley. But to get down that precipice! That was the problem.

For days and weeks they puzzled over it. At last they determined to bore into Big Bear Mountain a descending spiral tunnel. The tunnel was to enter Big Bear Mountain at the end of a steel arch bridge, spanning the gorge, make a complete circle, and come out in the gorge, one hundred ten feet below.

The idea was unique as it was daring. But the men who built railways in the Maple Leaf Dominion were men of daring. The work was now progressing at both ends of the Big Spiral Tunnel. It was this project which they had come to view.

KING walked with Lita through the echoing depths, into the very heart of Big Bear Mountain. Electric

lights from the plant beyond the station were strung along the ceiling. Cables carrying wires were lying on the rock-strewn floor. The din was deafening.

Men in overalls, goggles shielding their eyes from bits of steel and stone, guided compressed air drills, reaming out holes for charges of powder.

Other men were loading these crumbled masses of granite into pigmy gondolas, which, drawn by pigmy locomotives over pigmy track, were plying to and fro, dumping the interior of the mountain into the abyss.

At the focus of construction, Loui Rael, who was guiding the party through, paused to watch the work.

"You have some hard-looking customers in here, Mr. Rael," ventured Harvey.

"A few, yes, sir," agreed Rael. "A very few are, as you would say in the States, bad actors. For the most part, our men are a lot of hard workers and square shooters."

They had paused beside the frame of the steam hoist which was loading rocks into the dump cars. The frame of this hoist rested on wooden sills placed close against the left wall. While they watched, two men slipped a sill off the flat car behind and started carrying it forward to a new set.

Lawson and Lita were standing somewhat behind Ravelstone and Harvey. Lawson watched the two men come sullenly on with the heavy timber. Something in their sullen demeanor made him recall his own grievance against his superior. The men passed the two elderly managers. Here, as if by prearrangement, they both stumbled, and in pretending to catch themselves, hurled the timbers straight at the official party.

Both Harvey and Ravelstone were looking away. Lawson saw the whole play. So did Lita. So did Rael. The girl uttered a startled cry. Rael grabbed Mr. Harvey by the shoulders and snatched him out of the way. Lawson hurled his whole weight forward, intercepted the falling timber and sent it spinning almost into the men who had thrown it.

A moment later he was quietly rubbing a hand over a bruised shoulder. Ravelstone faced him.

"Thanks, Mr. Lawson!" he said calmly. "I shall not forget that tackle."

Lawson grinned. Loui Rael moved quickly toward the two workmen.

"Scorch," he snapped, "another stall like that and you an' Mord get your time. Do you hear?"

"Geeve eet to us now, if you want to, you—"

The name Mordecai Mirandau started to utter was never finished. Loui Rael threw his left foot backward. His right hand shot out, caught the sullen mouth as it opened. Mord's head snapped back. His knees buckled.

Scorchy Withers folded his fists as if to take up his partner's fight.

"Want to try it, Scorchy?" laughed Rael.

Scorchy didn't. He dropped down on one knee and lifted his companion's head. Mord was spitting blood. Lawson eyed the general foreman. Rael stood over Scorchy, speaking in a low voice.

"Take him and get out of here, Scorchy," he said. "Both of you go to the office and get your time. You're fired."

Scorchy Withers laughed as if at some huge joke. Mord was spitting and blubbering.

"You'll pay for that, Meestaire Rael!" he blubbered. "I'll get even weeth you eef it's the last thing I do."

"Shut your trap an' come on, Mord," hissed Scorchy. "What the hell you figger on doin', anyhow?"

Rael turned to the superintendent.

"You saw that play, didn't you, Lawson?" he asked. "Those two jaspers deliberately threw that stick at Mr. Ravelstone and Mr. Harvey."

Lawson nodded.

"Where did you get them babies, Loui?" he queried.

"I took 'em on about ten days ago."

"Acted to me like they was honing to be fired."

"They've been giving trouble ever since they've been on the job. They're the hard ones I was speaking of. I'm glad to be rid of them."

"Aren't you afraid of them, Mr. Rael?" queried Lita. "Aren't you afraid they'll keep their threat and try to kill you? They look capable of it."

"Not that pair, ma'am," replied the foreman. "That kind never do anything but bark."

But for once Loui Rael was mistaken.

Scorchy Withers took Mirandau to headquarters. In the tent, Mord bathed his swollen face, washed clotted blood from his mouth, fingered three loose front teeth, pulled off the dirty overalls.

"I shall keel Loui Rael before I leave," he said coldly.

"You'll do nothing of the sort," Scorchy snapped back. "You had no business startin' that row."

Mord rolled the dirty overalls and stuffed them into the cheap imitation leather bag.

"I shall keel Loui Rael, tonight," he averred.

Scorchy laughed. He did not contradict. He led the way to the timekeeper's shanty. He and Mord drew their money. Then they returned to their tent, picked up their cheap luggage, and started walking down the railroad track toward Sleepy Valley.

They did not go far. At the first trestle they left the tracks, crawled down into the gorge, found a sort of cavern, and cached their grips. Having done this, they lay down on a patch of moss and slept until long after dark.

Dirty Work at Big Spiral

LAWSON took his visitors back into Sleepy Valley that night. Mrs. Lawson did not go. The second trick operator had decided shortly after noon that he did not want to work another day for the old Snake Mountain, so the dispatcher asked her to work his trick until midnight.

Often, when she worked overtime, Loui Rael would come up to the office and visit with her for an hour or so before retiring. Loui was an interesting chap. He had built railroads all over the Dominion, in Australia, and in Africa. He was human and sensible, and Millie Lawson liked sensible people.

This evening, he launched out into a tale of what had befallen down on the Cape-to-Cairo line. He remained more than an hour. A storm came up from the west. But so interested had they both become, that they did not notice the lightning playing down over the jagged peaks, nor the black cloud which climbed up to wipe out the stars.

At 9.30 the dispatcher called, giving Millie an order for a freight which should come down shortly after mid-

night. She copied the order and laid away the pad.

Loui Rael went out to the platform while she was copying it. He did not notice the figure skulking in the spruce trees, nor the one at the corner of the power plant. He returned inside.

"Did you know it was raining?" he queried.

"Raining!"

"Yes, raining! And a terrible cloud coming up from the west."

"I hate rain and clouds and thunder," she said with a slight shudder. "It reminds me of when I used to hold a trick down in the Ozarks of Missouri. I suppose I'm getting nervous."

Loui Rael had already buttoned his coat and was standing with his hand on the door knob. He stopped to look outside at the blazing sky. He observed that the electric bulb just over the station platform was burning. He glanced inside at the woman. He unbuttoned his coat and sat in the chair.

"I should have gone before this began," he apologized. "Now I guess I'll stay until it is over."

Millie wanted to thank him. She did not do so. Lightning came, and thunder, peal on peal, and the wind howled outside. It picked up sticks and pieces of bark and hurled them against the wall of the station. The telegraph wires rang with a weird whistle, like ghost voices calling.

While it was still storming, Millie's call came in over the wire. She laughed. She knew it. It was her husband from Sleepy Valley. King always called when the storms came, if he could do so.

She opened and ticked out a signal. It was their signal. There was no response. She turned to Loui Rael.

"The line is dead," she explained. "It must be down."

"This storm would tear anything down," replied her visitor.

There came a short, sharp crack. It did not sound like thunder, but like the report of a .45. Loui arose and looked out. The light above the station platform was not burning. He pulled down the shades.

They continued talking. Loui told of a winter in Australia. The storm continued almost two hours while he yarned on. At 11.45 he arose to leave.

"I'm glad you stopped in, Mr. Rael," said Millie.

"Thanks, Mrs. Lawson, I'm glad to have been here."

The general foreman opened the door and stepped out into the night. Millie went to the door with him. She watched him slosh up the path toward the construction headquarters, where one lone light glimmered through the trees. She saw him disappear in the spruce grove.

STEPPING back, she closed the door. Then she opened it. She noticed that the light was not burning in the power plant. The night man usually had one. She closed the office door once more, but did not lock it.

Several minutes passed. She thought she heard a step on the wet cinders. She wondered if Loui had returned.

The girl lifted a corner of the shade, but could see nothing.

While she looked, she thought she heard the door open. She was sure of it, for she could feel the draft. She turned slowly. A huge figure was framed in the doorway. It was a man's figure. His face was concealed behind a black mask. His right hand held a .45.

"If you behave yourself, lady, you won't be hurt," a voice said.

Millie did not cry out. There was

no use. There was no ear to hear her. She thought of her key, remembered it was dead. The man came to her. He had a stout cord in his hand. He caught her wrists, laid the .45 on the table, bound both her hands. Then he carried her into the freight room and laid her on the floor.

While he was tying her feet, the door opened, and another man came in. He wore a black mask. He was short and squat. He was visibly excited.

"I have keel Loui Rael," he quavered.

The other turned on him furiously.

"You fool!" he shrieked. "I ought to kill you. I told you to let Rael alone. Now you've balled up the works, an' we'll have to rub this dame out."

He turned loose a string of bitter oaths, many of them. His companion did not seem to mind. He was shaking again!

"I have keel Loui Rael. I am glad!"

The two men went outside. They were gone a long time. She wondered if they had left the premises. The small man came back in. He was muttering to himself. He set a heavy load on the floor. Presently he picked it up and began to pour out liquid. She could hear the *glub-glub-glub* of air entering the spout of a can. She could hear the liquid spilling on the floor.

He came into the freight room. He began pouring from the can on the floor, and on the few pieces of freight which stood there. An odor came to her nostrils—the odor of kerosene.

She wondered if they intended to fire the building. She began to tremble. She remembered the night when she had almost burned to death in an accidental fire in the station where she had worked on the M. N. & A. That was before she and King were married. Larry Granger had come to her rescue then. There would be no one, now. She wondered vaguely if Lita Ravelstone— A pang of jealousy shot through her being. Then she quit thinking.

IN Sleepy Valley, Lawson's visitors went to the hotel. He went to the office. He was sore as a boil. He sat down and wrote out a resignation to take effect at once. About the time he finished, he was surprised to see Lita Ravelstone come in. She was alone.

"You work late, Mr. Lawson," she said.

"I'm working late just about my last night in this job," growled Lawson.

"What's wrong? Going to hire a helper?" she laughed pleasantly.

"I'm going to let somebody else hire the helper," snapped Lawson. "I'm resigning."

He flipped the piece of paper to the young lady. She read it carefully, and tore it in two.

"You're doing nothing of the sort," she said calmly.

"I most certainly am."

"Listen, Mr. Lawson," she said, lifting her hand. "You came here to do a job of work. I know. I've heard it talked about more than once. That job is not finished. You've never quit a friend yet. You won't quit Mr. Harvey."

Calmly she threw the scraps in the waste basket, and began talking about other things.

Lita mentioned the men whom Loui Rael had struck that day in the tunnel.

"I wondered if he might harm Mrs. Lawson."

"Why—why—I don't know, Miss Ravelstone. She's always worked nights. I—"

"I just thought about it. That's all."

By 9.30 a storm was coming up. Lawson took Lita back to the hotel, and himself returned to the office.

The storm arrived. Lawson sat rocking to and fro. He thought of Harvey, of Ravelstone. He thought of Lita, of Millie. He recalled Lita's suggestion. He went to the table in the corner of his office, plugged in and opened the key which he had connected.

He sounded Millie's call at Big Spiral. The sounder opened naturally. Then suddenly it went dead. He tried again and again. He could get no response. He hurried into the dispatcher's office.

"What's the matter at Big Spiral, Sandy?" he queried.

"Storm up there, sir. Wires down more than likely."

"I don't think so. Try another wire."

Sandy tried all the wires running into Big Spiral. They were all dead.

"That's it, Mr. Lawson," he assured. "Wires down somewhere. Probably a tree fell across them, or maybe a pole broke in the storm.

Lawson walked the floor for fifteen minutes. At 10.00 he came back into the dispatcher's office.

"What's on the line between here and Big Spiral, Sandy?" he inquired.

"Not a thing, Mr. Lawson. Why?"

"I'm going up there. There's trouble brewing."

"Nonsense, sir! Nonsense!"

"I'm going, I tell you. Have you got anything ordered?"

"There's an extra ordered north to leave at 10.50."

"Have the engine turned. Put me out a running order. I'm going to Big Spiral."

Lawson ran into the office, grabbed a slicker and his old .45 and ran down into the yards. The engine was on the turntable. Perry McDougal was in the cab.

"This is luck, Mac!" cried Lawson.

"What's up now?" queried the hogger.

"I don't know. The wires are dead to Big Spiral. I'm afraid something's happened."

"Mrs. Lawson on duty up there, sir?"

"Yes!"

He sprang into the cab.

"My fireman's not down yet, sir," informed Perry. "The call was for 10.50, you know. It's only 10.10."

"I'll fire her," broke in Lawson. "We'll go without a conductor. Our orders will be ready at the office."

"It isn't quite regular, sir," protested the engineer.

"Nothing is," snapped Lawson. "Let's get out of here."

He opened the switches. They hit the main line. McDougal did not stop. The operator handed up an order giving them rights over all trains.

THE usual running time up the hill was seventy minutes. McDougal reckoned he could do it in sixty. He left town as if he expected to do it in forty.

A mile from Sleepy Valley, King had the 623 popping. Mac had the reverse hooked up, careening along fast enough, almost too fast. Lawson was on the left cab seat. As they struck the foot of the long grade where the curves began, McDougal slowed down. Lawson leaped across the cab.

"Let me have her a while."

With a friendly grin, the engineer slipped out of his seat. Lawson slipped under the throttle lever, pulled it back

and hooked up the reverse. McDougal dropped down to scoop coal.

They made good time to the mile post at Big Spiral. Lawson was whipping the little thin gage pig around the curves faster than an up-bound engine had ever taken them. The rain was pouring. Lightning ripped the sky. Thunder crashed against the crags. But Lawson did not hear it.

As the lightning flashed and shimmered across the mountain, he saw in its gleam something lying on the track. It was around an inside curve. The headlight had not yet found it. He could not tell what it was.

He swiped the left hand across the throttle, set the brakes with his right. Perry McDougal slammed up against the boilerhead.

"What the hell—" he began, almost angrily.

"There's a tree across the track," yelled Lawson.

He left the brakes set and ran out over the pilot. McDougal was at his heels. The tree was a big spruce. They could not move it. Lawson looked at the telegraph wires. It had not touched them.

"I'll walk the rest of the way, Mac," Lawson yelled above the storm. "Give me your torch."

The flambeau was sputtering as the rain beat upon it.

"I'm going with you."

McDougal did not surrender the torch. He ran quickly back to the engine. He jerked a chain out of the locker under the tender and blocked the drivers. He banked the fire, and shut off the water glass and pumps. There was enough water in her to last three hours.

Lawson was a fast walker. The little Scotchman almost had to run to keep up. He was running when they crossed a high trestle. His foot slipped on the wet ties. He dropped the torch. It went spinning down into the gorge, a hundred feet below. Mac swore.

"Hurt?" queried Lawson.

"Hell, no!"

Perry came up rubbing his shins. He and Lawson had to go it in the dark now. They did not have a lantern. They took it slowly across the trestle. There were many trestles. They had to feel their way.

It must have been 11.30 when they lost the torch. The next half-mile was at a snail's pace.

"I hope there's nothing seriously wrong," McDougal said, when they were passing the lower switch.

"There probably ain't," growled Lawson, who, by now, was beginning to wish he had not left Sleepy Valley in such a hurry. After all, it was probably only the wires down. Millie was more than likely sitting in her padded chair reading a novel.

They went by the switch. Its light was burning brightly, but the bulb which usually hung above the station platform was out. They could see only one light on the uncompleted bridge across Bear Canyon. There should be eight. The one was at the farther end, next the tunnel entrance.

"It's funny about those," muttered Lawson. "If the storm had put them out they'd all go dead together."

"It is funny," agreed the engineer. "We'd better take a look-see."

THEY moved more cautiously. The storm had gone now. The lightning was faint and far away. Once in its dull gleam, they saw a figure scurrying across the tracks from the power plant to the station. He seemed a long way off. He walked with a hur-

ried, limping stride, as if he were carrying something heavy.

He disappeared in the station. The station was dark. There should be a light in the window.

"It looks fishy," whispered Lawson.

They were soon almost even with the end of the power plant. The motor was still running.

There was a dim light in the plant. It was flitting from place to place.

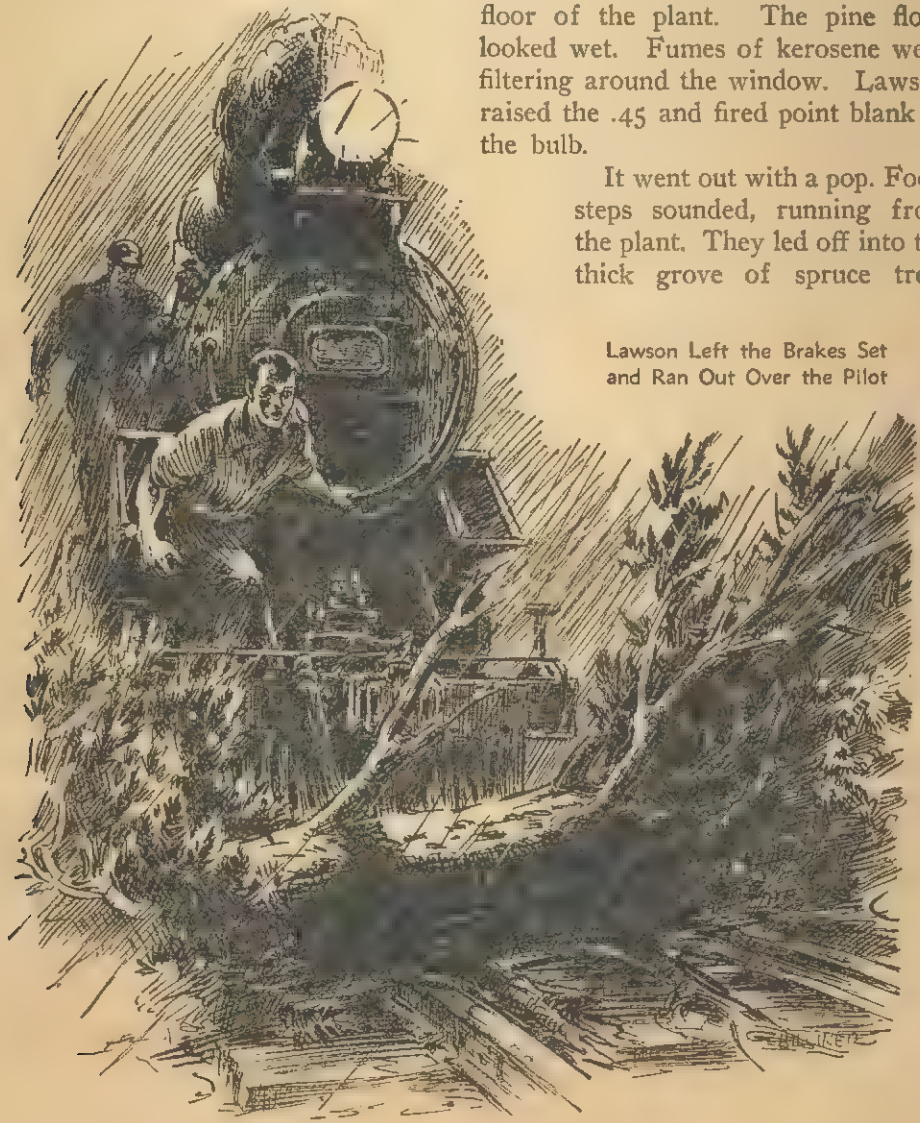
The two men slipped up to a window. Lawson stumbled over a tomato can. He cursed under his breath. The light suddenly switched off.

"Is that you, Mord?" queried a voice.

Lawson recognized that voice. It was fresh in his memory. No one answered.

The light switched on. McDougal's face and Lawson's face were against the pane. A five gallon can was on the floor of the plant. The pine floor looked wet. Fumes of kerosene were filtering around the window. Lawson raised the .45 and fired point blank at the bulb.

It went out with a pop. Footsteps sounded, running from the plant. They led off into the thick grove of spruce trees



Lawson Left the Brakes Set and Ran Out Over the Pilot

beyond the tracks. Lawson and McDougal sprang away in pursuit.

They did not go far. As they ran, a startled cry came from the station. An illumination burst behind them. It was coming from the station. A moment later a woman screamed.

In one stride, both men were running toward the spruce grove into which the fugitive had fled. In the next they were running toward the burning station. A figure reeled out of it. Lawson fired. McDougal aimed and fired, then fired again.

Lawson did not stop. He burst open the door of the telegraph office. Streams of flame were flowing over the floor. He darted through those streams. Millie was calling.

"Help! Oh, help!"

King burst into the freight room. The fire had only now gone through the door. He grabbed Millie in his arms and ran to the back door. It was barred inside with a plank in two brackets. He jerked up the plank, desperately shoved back the door, and fell outside.

Men coming down from the construction camp found Loui Rael lying under a spruce tree with a knife between his shoulders. He was not dead, and he did not die.

Other men found Mordecai Morandeau lying on his face on the railroad track. He was dead, shot through the heart with a .45 slug. They never located Scorchy Withers.

Next morning the official party loitered on the platform, waiting to leave Sleepy Valley. They were talking about the burning of the station at Big Spiral.

"Of course, they were after our power plant," boomed the contractor, stalking up and down.

"How did Lawson happen to be up there last night, sir?" Ravelstone asked the dispatcher, who was with them.

"He had a hunch, sir, I think," returned the dispatcher.

"If he hadn't gone, we'd have lost a month on the tunnels," breezed the contractor. "A full month!"

"It's nice to have a man who has these hunches, eh?" suggested Old Man Harvey.

"It's damn nice," agreed Ravelstone. "Is our train ever coming to take us to Devil's Gateway?"

"It's all ready, sir," assured Lawson, who came striding down the walk. "It will be at the platform in a minute."

The Crevice in the Canyon Wall

SLEEPY VALLEY seemed to hold for Lita a peculiar fascination. She took up her abode at the hotel in the dingy terminal village, and neither threat nor persuasion from her foster-father could induce her to leave.

With her system pass and with the still more effective one of her personality, she rode where she would. Often, during the summer and late fall, she would go to Big Spiral with Mrs. Lawson and spend the day practicing with a telegraph set which Millie rigged up for her. She learned rapidly.

Sometimes, when the weather was fair, she would leave the office, go down into the gorge and loiter, watching the men at their work.

When winter came and the snowplows were brought out to keep the mountain cuts cleared, Lita used to hurry down to the yards in the dawn, scramble into the cabs of the plow or into the engine cabs. Lawson remon-

strated, assured her she'd be killed some day.

"What of it?" always was her reply.

To him she was always respectful. Mrs. Lawson was worried for a while. The peculiar circumstances of their first meeting—Mr. Harvey's half-jesting warning, her husband's confusion when he and Lita met that morning in Devil's Gateway, Lita's apparent affection for him—all tended to fill her with concern. But as the weeks passed, and as she came to know the foster daughter of her husband's employer, her uneasiness left.

Ravelstone came down every few days to follow the progress, and with every trip he became more uneasy.

"I can make my end of it if the narrow gage can keep our stuff coming in," the contractor on the Eagle Nest Tunnel assured him.

"It's goin' to be nip and tuck with me," the contractor on the Big Spiral complained. "It all depends on Lawson and his narrow gage. If they can keep the material in, we may make it. If they can't it's goin' to be too bad."

Winter that year was one of the fiercest in the history of the region. Snow piled up in the passes. It gathered in vast masses, on the spire-like peaks, and slid off down the mountainside, sometimes burying the puny tracks beneath tons of débris which the rotary could not budge.

But through it all, Lawson's men stayed behind him, grimly following him. Of those whom he held in service in November, all except Spike Nelson and one conductor were still working until spring, and these, caught one night in an avalanche, would never club another brake or cool another hot box.

The winter wore through as piece after piece of the construction work was completed and turned over to the company. By the first of March the broad gage trains were running into Sleepy Valley from the west. By the first of April the big steel arch bridge over Bear Canyon was done, and the track built between the two tunnels, and only a short stretch in the very heart of each tunnel was left to be finished.

The final date set for establishing commercial traffic between Devil's Gateway and Sunshine Valley on the Border was May 15th. The Atlantic Western, through the coöperation of powerful interests in Washington, New York, and Ottawa, had made full arrangements, in case of default, to include in the new charter which would become necessary a clause to prevent the uniting of the V. R. M. & E. and the C. & S. L. through the medium of the new line.

On May 6th it became evident that the terms of the charter would be fulfilled. Trains would be running at least a day ahead of time.

ON the night of the 7th four immaculately clad gentlemen met in a hotel suite in Spokane. At dawn of the next day Pug Horan and Scorchy Withers, disreputable, unkempt, ill-smelling, took leave of this committee, leaving behind them trays full of cigar stubs and empty champagne bottles.

"Of course you understand, gentlemen," one of the immaculately clad four was saying to the disreputable two, "there is to be nothing raw, nothing crude, like shooting down tunnels, or blowing bridges or wrecking trains, and murdering fellow men. We won't stand for that sort of thing." He winked slyly.

"We understand," mumbled Pug. "You'd rather not have this new rail-

road run trains into Sunshine Valley. And if it don't, there'll be twenty grand."

"Exactly! Exactly!" spoke another of the smooth ones, rubbing his hands as if to wash them of all guilt.

The four smiled. The two nodded, and side by side went striding down the deserted street.

On the afternoon of the 9th, Pug and Scorchy rode the cushions into Sleepy Valley. Pug had often returned to the scene of his earlier operations. He seemed to be flush with money, staying at the best hotels in town, and consequently his coming aroused no comment.

He went out on the line, over to Big Spiral, and spent the afternoon of the 12th loafing about.

Now, it so happened that on that morning, scarcely three hours before his arrival, one of the men working on the new section down the canyon about a mile below had found a crack in the wall of the gorge overhanging the track.

This crack ran along the wall for 200 feet or more, beginning at a point some thirty feet in height and following a seam down almost to the level of the roadbed. It made a sort of scale on the mountain wall. Apparently it had been caused by the blasting away of the outer layer. The man reported to the foreman. The foreman called the roadmaster, who came down to investigate. He studied the crevice very carefully. There seemed no immediate danger.

"We've not got time to shoot down this whole mess and clear it away before day after tomorrow, Shorty," he told the foreman. "But before Rael moves that last drill outfit, you get hold of four or five drills and put holes in along about here." He indicated two heights which he thought would crumple the whole mass. "And when this all-important first run's over, we'll shoot it down a piece at a time. Do you see?"

The roadmaster returned to Sleepy Valley and promptly forgot about the crack in the Bear Canyon wall. Pug Horan, hearing about it, went down to look it over. He saw the men drilling the hundred holes for powder charges, and an evil grin came over his pock-marked visage.

THE ceremony had been carefully planned, of course, gold spike and all that bunk. The northbound and southbound trains were to meet at the border at noon of the 14th and change crews. Mr. Harvey was to come into Devil's Gateway on the morning of the 13th, meet Mr. Ravelstone from Queen City, go over the whole line that day, ending up at Sunshine Valley, so as to be there for the ceremony.

If plans hadn't gone awry, the officials would have gone over the line in daylight, theirs the first train to make the run. But during the night a lumber drag hit a broken rail coming down out of the Selkirks. It tied up Mr. Ravelstone's special until late afternoon.

As a result of this delay the train carrying the officials was until 8 P.M. getting out of Devil's Gateway, and almost midnight leaving Sleepy Valley.

Lawson went to Big Spiral that morning. He set his business car in siding, expecting to have it hooked on the special when it came through. When the delay was reported, he left it there, and spent the entire day going over the road with Roadmaster Hennessey on a speeder. They stopped at the fault and looked over the scale of rock on the wall of Bear Creek Canyon.

"It's all right, Hennessey," declared Lawson. "It would probably stand there a lifetime."

"Yes. But I'm goin' to have it moved, all the same."

They went on to other affairs, returning to the station about dark. And King went into the business car to dictate letters to his clerk.

Millie had come to work as usual that morning, doubling with the second trick operator, and intending to lay off the following day to go into Sunshine for the ceremony.

About 6 P.M. a freight crew stopped to pick up some cars of contractor's supplies which had been left in siding. The conductor went out to grab his seals and numbers. Soon he came back in.

"Got a car out here with a broken seal, Mrs. Lawson," he informed casually.

Millie looked up in surprise.

"Broken seal?"

"Yeah. Took hold of it to get the number an' the darn thing slipped—been twisted off."

He held out the strip of tin for her inspection.

"Funny how many seals get broken, isn't it, Mr. Gaylord?" Mrs. Lawson said as she slipped another seal out of her drawer. "You know, if curiosity still killed cats, there'd be an awful lot of cat funerals."

"That cat was monkeyin' around some high-powered stuff," laughed the conductor. "Lot uh odds an' ends from the blastin' gang down the Big Spiral."

The conductor and Mrs. Lawson went out together to seal the car. They opened the door and looked inside. It appeared as it had when she sealed it the night before. Gaylord coupled up his train and pulled out toward Sleepy Valley. Mrs. Lawson returned to the office.

"Forty Per Cent."

AS work on the two tunnels drew near completion, Lita Ravelstone became moody and disconsolate. It was as if she had hoped the tumult and turmoil of construction might go on forever. On the morning of the 13th, she came up as usual with Mrs. Lawson, arriving at Big Spiral about 7.00 A.M., expecting to ride the special south with the official party.

All through the forenoon she wandered up and down the now quiet stretches, over the huge steel arch bridge spanning Bear Canyon. She watched the clean-up gang at work, clearing away old forms, gathering unused sacks of cement, worn drills, broken hammers, parts of broken block and tackle, lengths of frayed rope.

She even followed the completed track around the curve toward the Eagle Nest Tunnel, through the groves of tall spruce and poplar, pausing to survey the deserted camp where but a few days ago a tent city had stood.

Returning around noon, she learned of the delay to the official party, knew that the special would not be through until late. She went to the business car and slept until after five. Afterward, she went down to the office to sit with Mrs. Lawson, who would be on duty until midnight. She heard the dispatcher put out the running order of the special along the line.

"Won't be through here until 11.20, eh?" she said, glancing up at Millie.

Mrs. Lawson nodded.

Lita lounged around for another hour. Lawson came by, going up to the business car. Lita rose and followed him to the platform. She watched the freight winding down the canyon, carrying the last of the contractor's equipment. She turned as if to follow King to the business car, then, as if suddenly thinking better of her decision, came back into the office.

"I think I'll walk down to Madder, Mrs. Lawson," she informed.

"Really, child, I think you should lie down and rest," returned Millie.

Lita laughed bitterly.

"That's all I've done all my life," she snapped. "Rest! I can make it down there before dark, and catch Dad's car at Madder."

"But the special will not stop there, Lita," demurred Mrs. Lawson.

"I'll flag them," returned Lita.

Mrs. Lawson said no more. She knew when the girl set her head on doing a thing nothing could turn her.

Madder was a little more than five miles from Big Spiral by rail, a little less than four down the iron stairway. Lita strolled leisurely across the bridge, went down the stairway to the lower level, and followed the track into the canyon. The sun had already set. The bottom of the gorge was in shadow, shadow which deepened with each passing moment.

Lita did not hurry. She had almost four hours in which to walk four miles. She loitered along the gorge, picking at the gray rocks, turning to stare up at the mountains purpling in the twilight. Once she heard a rock roll. She paused, her heartbeat quickened. Then she eased forward to investigate. A little black bear, head wagging from side to side, red tongue lolling out, was climbing the dump a hundred yards below. Lita shrank back into the shadow of the cliff to watch.

Bruin stood a long while on the grade nosing about the ends of the ties. He lifted his head, sniffed the tainted air, turned and marched sedately down the railroad track.

Lita turned to glance back up the gorge. She had been here in this one spot for a good hour. It was almost dark. She was tempted to return to Big Spiral. She retraced her steps for a hundred yards, then with a nervous laugh started walking down the dim shadowy gorge.

NOT far from the point where the crevice had developed in the wall she came once more in sight of her friend of the mountains. He was still waddling along, stopping now and then to investigate some new wonder. She could just see his bulk in the ever deepening shadow.

She stopped. She was not afraid of the little rascal, still she did not care to hurry him. She waited another half hour. It was pitch dark now. While she stood there watching, she heard steps echoing up and down the gorge. Or was it the murmur of water? She shrank back into the shadow of a niche to listen.

The steps drew rapidly nearer. They were coming from the direction of Big Spiral. She wondered if Lawson, learning that she had started walking to Madder, had decided to follow. He was such a goose about women being out alone at night!

"Hope it is," she murmured. "It's nice to be alone with a real man in the dark and know he's not going to make love to you."

She listened to the steps. They were heavy. King Lawson walked lightly. She recalled having heard that

there were rough characters camped in the canyon. As they came nearer, she could hear a voice—a hoarse, harsh voice.

"Let's rest a minute, Pug!" it croaked. "I'm all in."

Lita shrank back into her niche. Something within told her she didn't care to meet its owner. Not twenty feet from her a wooden box struck the ties with a sharp thud.

Both men sprang back. One of them whirled on the other.

"Be careful with that damned stuff, Scorchy!" he snarled. "There's enough forty per cent. in that to blow us to hell an' half-way back."

"Tha's all right, Pug," growled the other. "It was a accident."

"Accident or not, I ain't hankerin' about headin' a funeral percession in this damn country. I want to live long enough to spend my half of that twenty grand."

For once Lita Ravelstone was really frightened. She cowered in the shadows, her heart beating fiercely. The men must pass within arm's reach of her. She drew the cloak up over her face to cover it. They stood panting. Soon one of them began fumbling with his packages.

"We got to git goin', Scorchy," he croaked. "We ain't got all night. That brass hat special'll be headin' round here in two more hours."

The trespassers picked up their four packages and started moving. They struck the middle of the track one behind the other, ten feet apart. The first one passed. Her heart was beating fit to burst. She thought he must hear it.

The second man came on. He stumbled, swore guardedly, paused to shift a package, and without looking in her direction went stumbling by.

For many seconds she did not move. The footsteps sounded up and down the gorge, their echoes growing gradually fainter until finally she could hear them no more. She stood listening, thinking. Scraps of their conversation came filtering into her mind.

"Forty per cent." "Twenty grand." "Brass hat special."

Having spent months around the construction job, she knew the meaning of every term.

"Forty per cent" was giant powder. "Twenty grand" was twenty thousand dollars. "The brass hat special" was her father's train, due in Madder within a few hours.

Still, she could not see the connection. She knew the special would not be carrying enough money to pay for a holdup.

The girl thought of returning to Big Spiral, of calling Lawson out to investigate. Yet it might be too late. It was up to her to do what she could. She followed them.

Easing out into the track, she picked her way carefully over the ties. Away off the north, up next the virgin snows, a lobo howled dismally. From another crag his mate answered the call. Somewhere a panther screamed, and a hoot owl called his querulous challenge.

On and on she moved, keeping in the shadow. She rounded a curve, passed a waterfall, reached the upper end of the newly opened crevice, where the rows of holes were in the rocks. She remembered wondering why those holes were there.

The roar of the water was deafening. She peered anxiously ahead, wondering where her men had gone. And as she moved, an arm suddenly came from the darkness. She felt the swish of its movement. She dodged, uttered one short cry, and the next instant felt

something descend upon her crown. Darkness closed about her.

The Young Brass Hat

AN hour and a half after Lita left Big Spiral Mrs. Lawson called the operator at Madder.

"Has Miss Ravelstone arrived there yet?" she queried in code.

"No. Not here," came back the reply.

"Call me when she comes, please," requested Millie.

"K," shot back the operator.

At that moment King Lawson was sitting in the business car. All day long he had been a bit uneasy. Pug Horan's presence at the tunnel the preceding day worried him.

Always when he was in siding, he kept a hookup with the wires, so he could know exactly what was going on. He heard Millie put in the call for Madder, and heard the reply. Immediately he slipped on his coat, and started down to the Big Spiral office.

"What's wrong with Lita, Millie?" he queried.

"Oh, nothing, I suppose," returned his wife. "Why?"

"I heard you ask Madder about her. I wondered."

"Aw, the little mutt took a notion about dark she was walking down to Madder to get the special there. I thought she ought to be there by now."

King looked at his watch. It was 9.30. "She should be down there," he reckoned aloud.

"Oh, she's probably stopped somewhere along the road to play with a ground squirrel, or gaze at the stars twinkling above some peak."

Millie was trying to conceal the note of uneasiness in her own voice. King remained in the office another fifteen minutes. He looked at his watch a dozen times during the interval.

"I'm going down there, Millie," he said at last. "There's no telling what might have happened. There are varmints in that canyon she wouldn't want to meet. And there are some two-legged ones loose in this land that are still worse."

Millie looked up at her husband and smiled. King stooped and kissed her affectionately.

"If I'm not at Madder within an hour, you call into Sleepy Valley and get the Mounties out on that special."

"All right," returned his wife. "We'll call out the Mounties."

King started to take the .38 which Millie always kept in the drawer of her new pine table. Then he put it back, and running up to the car, got his own .45. When he returned his wife was standing on the platform.

"Hear anything?" he queried.

"Not a word. I hope everything's all right."

With a pat on the hand, King passed her by and went hurrying down into the gorge. He switched on the flashlight, played it over the tracks and along the river.

The beam turned suddenly yellow, flickered for a moment, and died. King swore softly. He had intended to get a new bulb. He had forgotten it. He wished he had brought a lantern. He stopped. Stars were glowing in the thin strip of sky above the winding gorge. Along the boulder-strewn bed water moaned and mumbled.

He shook the flashlight. The beam came back. He hurried on. He passed the point where the black bear had come up from the water. Wet

mud showed on a new fir sleeper. He stopped to study the mud. He quickened his step. He began running. He called frantically.

"Lita! Oh, Lita!" but only the echoes of his own voice bounded up and down the canyon. And while the echoes were still sounding, the flashlight flickered once more, the gleam yellowed and died. He could not revive it.

WHEN Lita recovered her senses she was lying on her back on the rocks, close up under the wall of the gorge. Her hands were bound tightly at the wrists with many turns of fine insulated wire. Her feet also were bound and a gag was in her mouth. Her captors were standing above her, playing a thin beam of light on her body.

"Yuh know, Pug, I could use a dame like that," muttered Scorchy admiringly.

"Yeah? Well, yuh ain't goin' to use her, Scorchy."

"Naw? You takin' her along with yuh to help spend that money?"

"Nope. She's goin' west."

"Yuh mean—"

"Sure. Yuh know who she is, don't yuh?"

"Naw. Never seen her before."

"That's Ravelstone's kid."

Scorchy started visibly.

"Huh?"

"I said that's Ravelstone's kid, an' she knows too damn much. Shame, ain't it?"

"What's she doin' trapesin' down here this time uh night?"

"Ask her, maybe she'll tell yuh." Pug laughed. "We've got to get busy, guy," he said. "We ain't got all night."

The men moved away. Soon Lita heard the steady *whick, whick-whick* of wood striking stone. She knew it was the click of tamping sticks, setting charges of dynamite in their holes.

"So they aim to blow this down and block the road?" she thought. But the full significance of their scheme she did not know until some time later.

Before the two men had been long at their task, she heard another sound, echoing up and down the valley. It was calling her name, "Lita! Oh, Lita!"

The men ceased their tamping.

"What the hell's that?" queried Scorchy.

The sound was repeated.

"Sound's like Lawson — Lawson callin' this dame."

"Thought you said Lawson would be on that special," muttered Scorchy.

"I thought he would be. I can't figger—oh, I see!" he sneered. "Lawson an' the dame was meetin' down here tonight. That's good, Scorchy! Nothin' could suit us any better!"

The two thugs went up the gorge. Soon Lita heard the steps coming down the track, coming on the run. And at almost every jump, she heard the voice of King Lawson calling.

"Lita! Oh, Lita!"

She tore at her bonds, tried to chew the gag. It was no use.

Presently Lita heard another call.

"Li—"

It was not finished. There was the sound of a short struggle. A few minutes later two pairs of heavy steps came down the track. The men paused beside her and unceremoniously tossed a body into the ditch.

Without even looking to see where it had fallen, they hurried away, and soon she heard the quickened stroke of tamping rods.

Lawson's body fell not two feet from her. Rolling and squirming, Lita

brought her own helpless form alongside his. By the way his breath hissed through the gag she knew he was conscious.

Soon Lawson began to struggle. He was working his body forward alongside her own. His head passed hers and then his shoulder, and then his hands came up even with her mouth. He turned on his side, his back to her, kept touching the side of her face. She knew he was trying to signal. She did not know what he wanted. Presently, she turned her back to him, so that her fingers touched his leg. Slowly in Morse, she tapped out the question.

"What want?"

More rapidly, Lawson's finger on her cheek tapped out the reply.

"Turn back of head to my hands. Want to untie gag."

Painfully Lita obeyed the injunction. Immediately Lawson's long fingers were working with the handkerchief. Within two minutes he had it untied. Quickly she spat it out and whispered.

"What now?"

Lawson tapped out one word: "Hands." And a second later he was working his body back.

For a long while he fooled with the fine insulated wires. They were intricately bound. He could not see. His feeling was numb and uncertain.

DOWN the gorge, toward Madder, the incessant *whick, whick, whick* of the tamping rods continued. Occasionally the light flashed on, a thin sliver which played over the wall and picked out the fine wires protruding from the charged holes. Heavy hands worked with those wires, twisting them about those which ran parallel with the face of the cliff.

At last Lita's hands were free. Quickly she whirled over and began working with the gag on Lawson's mouth. As soon as it was off, Lawson lifted his head.

"Hurry, Lita!" he urged. "We've got to get busy. They can wreck the outfit, kill every soul on board the train and make it look like an accident. We got to head 'em off!"

The wires on Lawson's hands were tangled. And every move she made only tangled them worse.

"Get my knife out of my pocket and cut 'em," he whispered. "They're nothing but copper."

Lita fished in his pocket for the big knife. The sound of the tamping rod had ceased. Before she found the knife the light was playing on the track.

"Quick, Lita!" whispered Lawson. "They're coming."

"What must I do?"

"Put that gag back on my mouth, just like it was. Then put yours back. Then lay down on your back, like you was all trussed up, and be sure the wires are all under you—quick! We've got to play possum and wait for a break."

Eagerly the girl obeyed. The men came. For a moment they stopped and shone the light on them. They did not detect the work which had been done. For several seconds they stared at their captives. Horan looked at his watch.

"We've got sixteen minutes to kill yet before that special's due, Scorchy," he said.

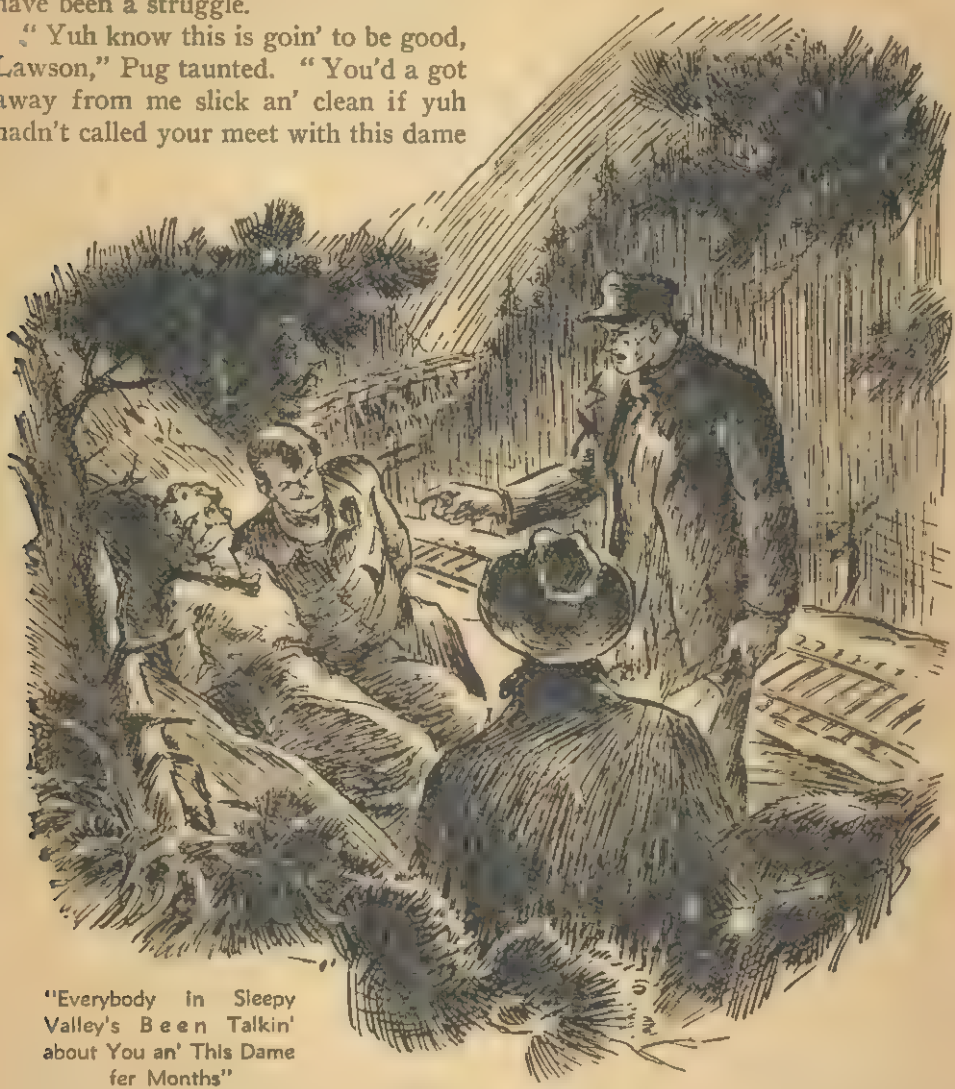
"We better crown these two babies an' get it over with."

"No hurry, Scorchy, no hurry. They ain't goin' to run off."

Pug lighted a fag and tossed the match out in the river. Then he played the light over Lawson's battered face. Blood was oozing from a cut over his eye.

Lawson's heart was throbbing wildly. That he and Lita were doomed seemed certain. If only she could have got his hands free, there might at least have been a struggle.

"Yuh know this is goin' to be good, Lawson," Pug taunted. "You'd a got away from me slick an' clean if yuh hadn't called your meet with this dame for Lita. Evidently the villain thought he and the girl had planned a meeting in the gorge. Perhaps—Pug was talking again.



"Everybody in Sleepy Valley's Been Talkin' about You an' This Dame fer Months"

down here. I thought you was on that special alongside of Old Ravelstone an' the others. An' here you comes chasin' a dame down here right into our little reception room."

Horan laughed loudly. Lawson's brain was quickly linking ideas. Horan did not know he had come searching

"This is sure good. Yuh know, there's goin' to be a hell of a wreck right about here in a few minutes. The mountain's goin' to fall down on top uh the brass hat special. The division superintendent an' Old Man Ravelstone's kid's both goin' to disappear. They ain't goin' to be heard of

till this smash is all cleared away, an' then— Haw! Haw! Haw! Mr. William Kingsley Lawson's goin' to be found lyin' right alongside of his lady love, Miss Lita Ravelstone."

Pug chuckled, then went on:

"Everybody in Sleepy Valley's been talkin' about you an' this dame fer months. Everybody knows about it, but poor Millie. Now say, ain't that good?"

Lawson heard Lita moving. His heart stood still. He thought she was going to rise and attack her defamers. But she held her head. Pug turned to his helper.

"Now let's go up an' take another look at this here battery outfit. We want to be sure it's properly connected. We can't take no chances. Then we'll come back here an' fix things up right, an' then wait till the brass hat comes by. Lawson, this is one time I'm goin' to score."

KING did not move. The two men sauntered off up the track. The moment they were gone Lita came clawing to King's side.

"The dirty devils!" she hissed.

She found the knife. With three vicious strokes she cut the thin copper wires on his wrists. With another she slashed away the bonds about his ankles. Before the men had reached the turn in the wall where their battery was her own ankles were free.

Lawson scrambled to his feet. The world was reeling. It seemed ready to reach up and slap him in the face. He took a step, two of them, and fell sprawling.

"You're hurt, Mr. Lawson!" she cried softly.

"Nothing," he snapped back. "A little whack on the head. I'll be all right in a minute."

She groped her way to his side. She held him up while he took a dozen steps. Circulation restored, his head cleared a trifle. He could stand alone and walk without falling down.

"Now what?" she questioned.

"The special. It'll be here any minute. Go down and flag it. Get as far as you can as quick as you can. Don't let 'em get by you. There'll be Mounties on board. If I don't come, bring them here on the double quick."

"You? What are you going to do?"

There was a note of anxiety, of panic in her voice.

"I'm staying here to stop these devils in their dirt. They can't get away with it."

"You'll be killed!" she quavered.

"Go on!" commanded Lawson, grabbing her roughly by the arm and forcing her down the track. "Don't stand there arguing."

With a sob she whirled and started down the gorge. Lawson turned his steps up the track.

From far down the canyon the sound of a locomotive whistle was coming faintly. An instant later the night came alive. Pug Horan's voice uttered a harsh command. Steps beat a heavy tattoo on wooden ties. A sliver of light came plowing down the track.

"I told you to quit foolin' an' get it done," Scorchy Withers was reminding.

"Shut your trap, you yellow rat," rasped Pug. "We got plenty time. We ain't goin' to ball up this job like you an' Mord did yours."

The steps came nearer. Lawson was standing by the wall. He threw a hand over his head, and brought it down quickly. Then he stood tensed, waiting. Pug came running on. Against the starlit sky, Lawson could see Scorchy three strides behind.

He squared himself for the plunge. Horan was even with him now. He threw the whole weight of his 190 pounds behind a mighty blow. The blow glanced. The big thug reeled. The flashlight left his hand to go spinning into the river. Horan turned, but he did not come back charging. Lawson remained motionless.

For many seconds there was darkness. Lawson smothered the sound of his own breathing. Pug Horan's breathing sounded loud, labored. Lawson knew that by now both Pug and Scorchy would have automatics drawn, waiting for him to move. If he budged, they could shoot at the second. Like a statue he stood in the shadows.

Soon he heard a guarded step. Scorchy was moving slowly away, moving up the track toward the battery. Horan did not seem to notice. Presently a spurt of red bit the night. Lawson thought Pug had seen him. A .45 slug thudded against the granite.

"I'll get you this time, Lawson!" hissed Pug. "Yuh can't git away."

King did not reply. He tried not to breathe. Other seconds passed. The locomotive whistled once more. It was nearer now. Pug fired a second shot. Then Lawson's heart stood still. Soon the headlight would come around the curve. In its reflected glow, he would stand outlined a dozen feet from Pug Horan's eyes. He couldn't miss.

Again the whistle sounded. This time it was two short blasts, the answer to Lita Ravelstone's stop signal. But that meant little to him. A few more seconds! Lawson's face wrinkled in a mirthless smile.

The train ground to a stop a quarter mile away. Plainly he heard the exhaust cease. Then it started again, slow, steady, rhythmic, like the tolling of a bell.

"Are you sayin' your prayers, Lawson?" queried Pug Horan. "Are—"

The sound of another voice interrupted Pug Horan. It was a sneering, taunting voice, coming from the upper end of the crevice.

"Good-by, boys!" it was saying. "So long! Pug, ole-timer. I'm collectin' twenty grand all by myself. *I'm* goin' to pull the switch."

Pug Horan did not move for many seconds. The meaning of his partner's words filtered through his benumbed brain. Scorchy Withers was going to pull the switch! Going to blast down the mountain on him and Lawson! Going to collect twenty grand instead of ten! Pug uttered a wild, frantic cry.

"Wait, Scorchy! Wait!" He did not fire the automatic. With another mad shriek, he was running up the track.

Lawson stood calmly waiting now. He knew the wall was not going to fall, because when he had stood waiting, he had pulled loose the wires which connected the charged holes with the battery. Let Scorchy Withers throw the switch!

What happened there, Lawson did not know. Soon footsteps were echoing from up the gorge. They were hurried footsteps, where Pug Horan and Scorchy Withers, trapped like rats in a hole, were seeking safety which was not for them.

The sound of the exhaust was steady. Perry McDougal was running into the danger zone. The light was coming nearer. Lawson could no longer hear the steps. He was standing in the full glare. Even with the end of the crevice, McDougal stopped, and six red-coated representatives of law and order came running to meet him.

Before they had covered a dozen

steps, King heard the crack of a pistol. Before there was time to dodge, there came another. The bark of Pug Horan's .45 blended with the noise of pursuit. He felt a stinging in his left arm. The Mounties were coming now. King moved aside to let them pass.

THE celebration took place as planned. King Lawson, his arm in a sling, was on the platform with the higher officials, with the flowers, bunting, and flags of two nations.

Dynamite Dan Ravelstone was there. He was speaking. He introduced Mr. Harvey and the chief engineer, and the rest of the big shots. He read a list of those whose lives had gone to pay the price of progress.

"Mr. Lawson." Ravelstone turned to face him. "Will you please rise? I want the people of this community to know the man who will stand as our representative, we hope, for many years."

King swallowed. Ravelstone's eyes were laughing eyes now. The gray goatee was quivering. Slowly the young division superintendent arose and bowed to the cheering crowd.

And back in the crowd, somebody set up the cry:

"Hooray for Lawson! Hooray for the young brass hat!"

(NEXT MONTH: Another King Lawson Yarn, "BEACON LIGHTS," by E. S. Dellinger)

Sunny Side of the Track

JUST LIKE IRON HORSES

I WAS sitting in the grand stand at a county fair, awaiting the first event in a horse show, which two rails were watching for the first time. The announcer called the first event, a pace. Almost immediately a driver paced a horse, gaited with pacing hobbles, in front of the grand stand.

"Hey, Bill!" One of the rails pointed. "Look at the horse with side-rods on!"—P. J. Kelly, Vice Gen'l Chairman, Big 4, Brotherhood of Ry & Steamship Clerks, etc.

* * *

PLENTY OF ALIBIS

THIS report was made on the train sheet by a first trick dispatcher on the old Chicago & Alton forty years ago:

Engine 207 made poor run, account right back corner mud ring leaking, also flue sheets valves out, right rocker box loose. Engineer claims engine very lame, uses lots of coal and water. Engine not steaming well. Has student fireman and a heavy train.

* * *

A PEST WE ALL KNOW

IN the still of the night passengers lay awake in the Pullman sleeper and listened to a fine demonstration of plain and fancy snoring. It was no straight ahead affair, robust, monotonous, but instead was full of sudden and awful variations. Sometimes strangulation seemed imminent; then in the middle of a fantasia, the agony stopped suddenly, and there was silence. One of the fellow-travelers was heard to remark in a plaintive voice:

"Thank goodness, he's dead!"

* * *

IRISH DIALECT

"WAITER," said a Santa Fe traveler in the Harvey House restaurant, "did you say I had twenty minutes to wait, or that it was twenty minutes to eight?"

"Nayther," replied the Irish waitress. "Oi said ye had twinty minutes to ate, an' that's all ye did have. Yer train's just gone."

* * *

AN INSULTING QUESTION

OLE OLESON was sitting in the Soo Line yard office at Oshkosh keeping an eye on things while the rest of the force were out to lunch. The telephone rang, and after some hesitation he answered it.

"Vell?" said Ole.

"Hello," came the voice from the other end, "is this nine-six-eight-seven-seven-o?"

"What you tink I am?" asked the outraged Swede. "A box car?"

International Engine Picture Club

READERS who collect, buy, sell, exchange, or make pictures of locomotives, trains, cars, etc., are listed here as members of the International Engine Picture Club. There are no fees, no dues. Names are published in good faith, without guarantee.

A membership button is given FREE to those who send in a "Reader's Choice" coupon (page 130) and self-addressed stamped envelope. (If you live in Canada or any foreign land, enclose a loose 3c stamp from your own country instead of the envelope.) Address Engine Picture Editor, "Railroad Stories," 280 Broadway, New York City.

Due to limited space, we cannot print details here. Write to members for full information. Use 2c reply postal card or enclose stamped envelope. Do not mail anything until you are sure the other fellow wants it. And remember, nobody likes to get a letter marked "postage due," especially in foreign countries where the rate is high.

In writing abroad, enclose an "International Reply Coupon" to cover return postage. These may be obtained in any post office at 9c each.

R. K. ALEXANDER, Center Harbor, N. H., wants historical locomotive pictures. Buy or trade.

J. ALLEN, 196 Grenadier Rd., Toronto 3, Canada, has CNR, CPR, NYC, C&O, B&O, IC, RI, Monon and others, at 6c ea. Stamp for list.

I. BAKER, 1110 W. 61 St., Los Angeles, Calif., has 8 Wiscasset, Waterville & Farmington Ry. prints. Five at 10c ea. and three at 15c. Entire set 75c.

H. BARROWS, 18 Aspinwall Rd., Dorchester, Mass., has for sale 2 locomotive, one air brake catechisms and one air brake book. Best cash offer.

J. BEATER, Box 264, Fort Myers, Fla., has prints of Tallulah Valley power. Sell.

L. V. BECKMEYER, 223 Morgan St., Keokuk, Ia., makes ink drawings or water color painting from any photo. Write.

H. BOOTH, 18 Elmwood Ave., Norwood, Pa., wants prints of freight equipment.

R. N. CARROLL, Waverly, Halifax Co., Nova Scotia.

E. CAPPON, 502 E. Marshall St., Hastings, Mich., will buy pictures of C&NW 4-8-4 type at World's Fair.

P. CHERINGTON, Box 62, Phillips Academy, Exeter, N. H., has pictures of New England locomotives. Free list.

E. T. COUTERMARSH, 21 West St., Lebanon, N. H., has collection of all types. Sell all. Write.

M. A. CROZIER, 578 Broadway, Malden, Mass., buys photos of armored trains, etc., foreign or U. S.

D. P. de LEON, 11 Norte 203, Puebla, Pue., Mexico, has employees' timetables, train orders and snaps of the Interoceanic and Mexican Southern Rys. Narrow gage. Mexican Railway magazines, Mexican postage stamps. Trade for NYC or PRR calendars.

W. F. DELPHY, 717 Van Ness Ave., San Francisco, Calif.

F. F. V. DOBBINS, 139 Elm Ave., Rahway, N. J., sells Rahway Valley, Raritan River, NYS&W, Erie and M & E prints, 3 for 10c. Also old Official Guides at $1 ea.

A. L. DOWNING, 922 S. 7 St., Atchison, Kan., has Burlington train orders to trade for engine photos.

R. B. DUNIGAN, 996 Link Ave., Springfield O., has complete set of Big Four to trade for sets of other roads. Also others to trade or sell for 5c.

G. L. DUNSCOMB, 5722 Keith Ave., Oakland, Calif., wants any 4-8-4's, old or extraordinary engines, SP 33, 34, 4200's. Has everything on SP's Pacific lines. Write for list.

W. DWIGHT, 1 Webster St., Quincy, Mass., has "National Car Builder" for Jan., July, 1880; Sept., Dec., 1881; "Railroad Gazette" for June 12, 24, July 31, Aug. 14, 1891. Best cash offer.

A. E. ENDY, R. 1, Boyertown, Pa., wants CMStP&P Nos. 1400, 8382, 7700, 2007, 2201, 2335, 2958, 2975, 8500, 9700, and 5800 electric, 2¼ x 4¼ preferred.

H. L. FAIRCHILD, 807 27 St., San Pedro, Calif., sells 5 x 7 historical California engines at 25c ea. Trade Pacific Coast for Frisco 2007 or No. 5 and many clippings.

BRIAN FAWCETT, Locomotive Dept., Central Ry. of Peru, Oroya, Peru, interested in exchanging railroad pictures and information.

J. M. FESCO, 1547 12 Pl., Los Angeles, Calif., wants Dec., 1929, "Railroad Man's." Send price.

K. A. GREEN, Brookhaven, Miss., buys "19" and "31" order blanks all roads; sells photos of circus advance cars and trains, 10c ea.

L. E. GRIFFITH, 738 Hammond Ave., Aurora, Ill., has old and modern CB&Q and IC engines to sell or trade.

J. E. GRUPP, 128 W. Elk St., Glendale, Calif., has various SP, UP and Santa Fe rolling stock to trade or sell. Wants NYC No. 1086.

D. G. HARRIS, 129 Dacotah St., Houghton, Mich., has Copper Range employees' timetables, Copper Range and Mineral Range train orders 1920 to date, and train orders other roads to trade for Santa Fe and UP orders.

H. W. HARVEY, 7623 Eggleston Ave., Chicago, wants ACL, Monon, FEC, CGa, SAL, L&N, B4 and all Canadian types, postcard prints. Buy only.

W. M. HAYES, 932 Westmoreland Ave., Syracuse, N. Y., has complete sets of 116 prints of Skaneateles RR. and the M&OL. Set of 5, 30c. Other roads, sample and list 10c.

E. K. HEATH, Box 15, Barre, Vt., has CV size 116 negatives to sell at 50c. Right side Nos. 708, 700. Left side Nos. 403, 462, 471, 503, 601.

T. K. HERRING, 1201 N. Ellison, Oklahoma City, Okla., wants photos of RI freight and passenger power used through Enid, Okla., in 1918-1919.

W. HESS, 1604 Washington Ave., Chester, Pa.

A. R. HOPFER, Medford, Ore., wants Colo. Mid. photos, circulars, timetables. Send list.

D. B. HORNER, 1455 Fifth Ave., Freedom, Pa., has GWRy of England 1924 timetable, General Electric Pamphlet "Metropolitan Subway and Elevated Systems," to trade for engine pictures, employees' timetables, and rosters of various roads. Send lists and offers.

L. JASANIS, 18 Seymour St., Pittsfield, Mass.

RAILROAD STORIES Reader's Choice
280 Broadway, New York City

Stories, features and departments I like best in the December issue are:

1.....

2.....

3.....

4.....

5.....

6.....

Give us more .....

Name.....

Occupation.....

Address.....

H. A. JENKINS, Windsor, Nova Scotia, has Dominion Atlantic No. 8 at 15c ea.

J. B. JOHNSON, 71 Hillcrest Ave., Trenton, N. J, has PAR, PRR, Erie, DL&W, LMS snaps for sale or trade.

P. H. JONES, 122 Franklin St., Owego, N. Y., has 2¼ x 4½ prints of U. S. roads, sell or trade. Free sample with list.

R. C. JOSLIN, 147 Everett St., Southbridge, Mass., has 2½ x 4¼ New Haven prints, trade or sell at 5c ea.; 6 for 25c.

B. KAUFMAN, 70-16 34 Ave., Jackson Heights, L. I., N. Y., draws railroad pictures.

H. M. KNAUER, 26 Pennsylvania Ave., Shillington, Pa., draws pictures of any engine in "Railroad Stories" for 50c, colored $1. Write.

M. E. KUNZLER, Box 609, Ontario, Ore., has 2½ x 4¼ UP, SP, D&RGW, etc., prints for sale. Wants western roads negatives. Buy or trade.

W. LANG, R. R. 3, Hader Ave., Cincinnati, O., has electric railway transfers, tickets, passes, etc., of Cincinnati and elsewhere to trade.

W. LICHTENSTEIN, 2128 Ryder St., Brooklyn, N. Y., has steam and electric postcards for 3 for 25c. List and sample, 5c.

W. F. LOTT, 10 Friend St., Taunton, Mass., wants timetables of merged or abandoned roads. Buy or trade. Has many old engine photos.

W. A. LUCAS, 56 Tuxedo Ave., Hawthorne, N. J., has over 6500 negatives of locomotives to pick from. No junk. Send requirements and self-addressed envelope for free sample picture.

K. H. MacDONALD, 48 Reed Ave., Everett, Mass.

S. McCORMICK, Princeton, Wis., wants to hear from members interested in traction engines and threshing rigs as well as railroad locomotives.

F. McKNIGHT, 118 Webster St., Malone, N. Y., has foreign stamps to trade for clear motive power clippings on the White Pass & Yukon or Soo Line.

M. MACKLIS, care Patterson, 441 New Jersey Ave., Brooklyn, N. Y., wants 1930 "Locomotive Cyclopedia." Buy. Has 4-4-2 builder's photo to trade for Virginian 2-10-10-2 negative or Erie 2-8-8-8-2.

S. MARTIN, 215 E. Fremont St., Stockton, Calif.

H. S. MORRISON, Iselin, N. J., buys negatives. Has hundreds of prints to sell or trade.

C. F. MUNGER, JR., 53 Phillips St., New London, Conn., has prints of 45 roads to sell to highest bidder. Also original lithograph 3 x 4 of Boston Loco Wks. woodburner (1854) to sell; timetables to trade for original New Haven and Central Vermont power with oil headlights.

E. NAGEL, 3639 Nevil St., Oakland, Calif., has all "Railroad Stories" since March, 1932; "Transit Journal" since Jan., 1932; "Transportation," Nov., 1930—July, 1931.

E. M. NORMAN, 22 Lincoln St., New Britain, Conn., will buy or trade snaps of all interurbans.

L. ORSBERN, 2403 E. Grand Ave., Des Moines, Ia., wants pictures of DMN&W, DM&KC, K&W, DMIF&N, SPDMSL, SPDM&KC, K&DM, NNW. Has many photos at 10c ea.; 10c for sample and list.

OSBORNE STUDIO, 610 S. E. 10 St., Des Moines, Ia., makes 3¼ x 5½ prints for 2c ea.

W. R. OSBORNE, 214 Lippincott Ave., Riverside, N. J., has speed photos of CNJ, B&O, D&H, PRR, Reading, Tuckerton, LV, RI, and LMS power. Good prints.

F. A. PALMER, North Haverhill, N. H., collects anything pertaining to railroads. Has train orders and clearance cards from B&M and CPR.

A. PARSONS, 6328 Cedar St., Huntington Park, Calif., has 12 glass lantern slides, 3¼ x4, of turbo-generators, to trade for engine pictures. Also has 20 2 x 5 old compounds including Mallet, Vauclains, Tandems, Rogers, Richmond, etc., to sell for 7c ea., 75c doz. Postage extra.

A. H. PAULL, 487 21 Ave., E., Vancouver, B. C., Canada, wants CPR engines 6-30, 198 and 199, 500-559, 1111, 1996-1999, old 3111-3122, 3185, any 3300, 5991-5993, 5997. Any M&A and DA locos.

J. PEARSON, 158 Harding Pl., Syracuse, N. Y., has employees' timetables of small roads to trade for small road passenger tables. Buy or trade.

F. L. PIERCE, R. F. D. 5, Oswego, N. Y., will trade DL&W branch line types for photos of other roads.

J. C. PROSSER-FRENCH, 56 Dry Hill Park Rd., Tonbridge, Kent, England, interested in American photos; write.

F. QUIN, 190 Rocklyn Ave., Lynbrook, N. Y., has postcard snaps of roads around New York City. Trade or sell.

MR. RAMOS, Cerro de Pasco Copper Corp., Oroya, Peru, interested in exchanging railroad pictures and information.

E. RATZ, 2218 Ohio Ave., St. Louis, Mo., sells St. Louis and E. St. Louis trolley snaps.

R. A. RAYER, 1033 S. Chicago Ave., Kankakee, Ill., has 2¾ x 4½ snaps of U. S. engines and trains, at 6c ea., 18 for $1. Stamp for list.

C. REIGN, 35 E. Henrietta St., Baltimore, Md., wants colored postcards of North American locomotive.

M. REYNER, 215 Wesley St., Petoskey, Mich., has "Railroad Stories," Trainmen's, Engineer's Journals, "Express Messengers," and other railway magazines to sell to best offer; 15 train orders (19's) for one engine photo.

L. RINGGOLD, Ponca City, Okla., wants AT&SF, RI, KCS, MKT, Frisco and SP engine photos.

G. B. RITZ, U. S. Veteran Hospital, Castle Point, N. Y., will trade 2¼ x 4½ snaps of Nos. 5, 6, 14 Tuckerton RR. for 3 of other roads.

F. J. ROE, 205 N. 13 St., Newark, N. J., has erecting blueprint of Mikado, also section blueprint to highest bidder or best negative trade.

W. RUSSELL, 404 N. Broom St., Wilmington, Del., wants views of PRR yards, engines, shops, etc.

J. P. SCHAAF, 912 Water St., Eau Claire, Wis., buys engines, trains, interurbans, street cars, transfers and car barn pictures. Trade or sell at 20c. ea. postcards norse car and barn pictures taken at Eau Claire in 1889.

G. SCHREINER, 5242 Lincoln Ave., Los Angeles, Calif., has many "Railroad Man's Magazines" prior to 1919 to trade for "Wide World Magazines." Also buy. No foreign deals.

F. O. SEYMOUR, 1011 Moores River Drive, Lansing, Mich., has postcard of GTW, PM, AA, MeC, Wabash, Big Four, CK&S, M&NE, MC, TStL&W, PRR, etc.; sell at 10c ea. plus postage. $1 per doz. No trade.

A. L. SHERMAN, Drawer N-14016, Trenton, N. J., will buy SP engines.

M. J. STEARNS, 7 Sewall St., Livermore Falls, Me.

G. THOMAS, Millville, N. J., has many railway publications. State wants and make offers.

A. N. THOMPSON, 174 Merrylands Rd., Merrylands, N. S. W., Australia, has large collection of Australian negatives to exchange for American photos.

E. L. THOMPSON, 3026 44 Pl., N. W., Washington, D. C., will sell or trade RF&P, Southern, P&R, CRRofNJ, Atl. City RR, NY&LB, PRR, C&O, NYNH&H, FEC, SAL, ACL, and B&O old employees' timetables.

J. W. THORPE, 911 Lake St., Niles, Mich., wants Mich. Cent. power, 2¼ x 4¼ or 2½ x 4¼ prints; also Mallets. Will trade 20 year old timetables.

W. TOTH, 5 Church St., Flemington, N. J., will sell or trade Dec., 1932, "Official Guide" for CNJ, LV or DL&W prints.

D. TOWLE, 6544 23 Ave., N. W., Seattle, Wash., has brotherhood magazines to trade for freight or passenger loco blueprints.

FERNANDO VILLAVICENCIO, Locomotive Dept., Central Ry. of Peru, Casilla 64, Callao, Peru, interested in exchanging railroad pictures and information.

A. VOSS, 1899 Broadway, Brooklyn, N. Y., will trade suburban types for balloon and diamond stacks. Also wants old 999 and Atlantic type with large headlight.

R. V. WALLACE, 33 N. 12 St., Sharpsville, Pa.

J. J. WIEGAND, 489 Chestnut St., Arlington, N. J.

A. WILSON, 11025 123 St., Edmonton, Alta., Canada, has Northern Alberta, CPR, and CNR snaps for sale; send stamp for list.

W. WILTSIE, JR., River Rd., Chatham, N. J., wants all types of engine pictures. Can supply Lackawanna multiple unit car photos Write.

F. W. ZIRBEL, 822 7 St., Lewiston, Idaho, wants NYC, M&WR, NYNH&H, PRR, DL&W, NYLE&W, D&RG, GN, CB&Q, and other negatives; send list.

* * *

Abandonments

Chicago, St. Paul, Minneapolis & Omaha, Luverne, Minn., to Doon, Ia., 28 miles. Denver & Rio Grande Western, Pagosa Jct. to Pagosa Springs, 31 miles. East Carolina, 11 miles south of Farmville, N. C. Manistee & Northeastern, Kaleva to Solon, Mich., 39 miles. Norfolk & Western, Wayne to point near Lenore, W. Va., 54 miles. Arizona Southern, Silverbell to Red Rock, Ariz., 21 miles. Burlington, Galesburg to Fairview, Ill., 29 miles. Southern Pacific, Colorado to Potholes, 12 miles, and Felton to Boulder Creek, Calif., 7 miles.

* * *

Construction

California, Shasta & Eastern, 20 mile branch from Palo Cedro, Shasta County, Calif., to Red River Lumber Co. property.

* * *

PHOTO CONTEST PRIZE WINNERS

Following are winners in Engine Photo Contest for pictures sent in between July 15 and August 15: M. F. Wells, 261 Hartford Ave., Wethersfield, Conn.; W. A. Silverthorn, 442 Johnson St., Sausalito, Calif.; M. Tapley, 198 Montrose St., Winnipeg, Canada; W. E. Hoffman, 1007 S. Baylis St., Baltimore, Md.; G. M. Best, 108 N. Harper Ave., Los Angeles, Calif.; I. C. Gillespie, 482 Sauchiehall St., Glasgow, C. 2, Scotland; W. Peters, 301 W. Washington St., Springfield, Ill.; N. M. Martin, 4 Lincolnshire Way, Winchester, Mass.; W. E. Bostwick, 437 W. School Lane, Philadelphia, Pa.; W. L. Carpenter, 2418 E. Anaheim, Long Beach, Calif.; J. E. Simmons, 566 Durie St., Toronto (9), Ont., Canada.

Locomotives of the Monongahela Railway

Class	Nos.	Type	Cylinder Dimensions (Inches)	Driver Diameters (Inches)	Working Pressure (Pounds)	Weight with Tender (Pounds)	Tractive Force (Pounds)	Builder, Date Built
H-5	115-140	2-8-0	21 x 30	51	200	331,600	44,100	Alco, 1913
H-5 SA	141-153	2-8-0	22½ x 30	51	200	361,390	50,625	Alco, 1918
L-1	170-179	2-8-2	26 x 30	63	200	513,050	*54,700	Alco, 1919
L-2	180-185	2-8-2	26 x 30	63	200	525,240	*54,700 *65,700 with booster	Alco, 1927

Next Month: CLINCHFIELD RR.

A Sea-Going Railroad

By E. J. BURNS

HENRY M. FLAGLER, builder of the Florida East Coast Railway, sat in a tent under a palm tree studying a topographical map of the Peninsular State. Pencil in hand, he drew a line from Miami, then a little Indian trading post, southwest to Key West, a desolate island of the Florida Keys.

"The main line will go out to sea," he said, "as far as Key West."

Highly paid construction engineers shook their heads. "Why, that's impossible!" they declared. "You can't build a railroad over the ocean, with its surging tides and fierce tropical storms."

"Nevertheless, gentlemen," persisted Flagler, *"it will be built!"*

And the road was built—at a terrific cost of life and property. The story of how it was done is a saga in railroad history.

By 1896 the twin ribbons of steel that struggled along the eastern shore of Florida had been pushed down as far south as Miami. Eight years later the line reached Homestead, twenty-eight miles further on. Then for nearly two years the engineers tried to lay an iron trail through the Everglades, with its deadly saw-grass that rises to a man's height, westward to Cape Sable, only to admit defeat at last and turn to the sea-going railroad projected by Henry Flagler.

Born in 1830, Flagler was 76 years old when work on this extension was actually begun. His hair was whitened by years of activity, his forehead wrinkled, his shoulders bent. The passion of his life was a steel highway linking New York with Key West, over which trains would thunder night and day. And from Key West to Havana, Cuba, was a bare ninety-mile stretch of open sea which could be bridged by fast steamships. Flagler's vision was to make Havana a suburb of New York City!

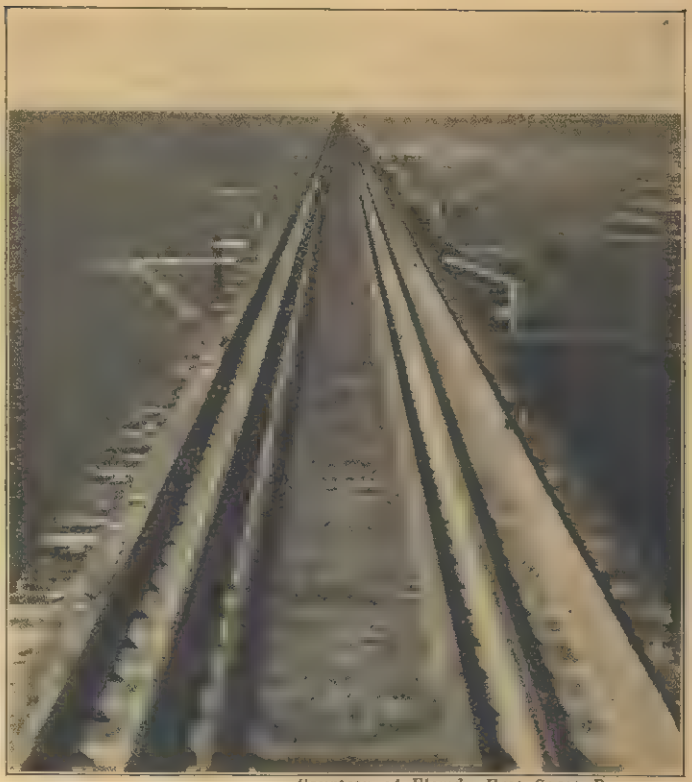
Florida East Coast Oversea Extension, Built by Henry M. Flagler

"He'll never live

to see it finished," men predicted sadly.

The Florida Keys, over which the extension was to be built, consisted of hundreds of small islands ranged in a graceful arc between the town of Jewfish, on the lowermost tip of the mainland, to Key West, sometimes called the Gibraltar of America, 128 miles from Homestead.

These islands are of coral and lime rock formation, part of a vast reef. Most of them are bleak and uninhabited The intricate channels among these Keys used to be an ideal hideout for pirate galleons which preyed upon the rich commerce of the Spanish Main. Even today one of the stops on the Key West Division of the F. E. C. is called Pirates Cove.



Courtesy of Florida East Coast Ry.

The Trip to Key West Is Like Taking an Ocean Voyage by Rail

Shallow tropical waters rival the rainbow in their variety of tints. Pastel shades of green and metallic blues merge into jade coral pink and sapphire. Below, the shifting tides surge between the ocean and the Gulf of Mexico, holding in their depths a thousand mysteries.

These waters are a veritable aquarium. Needle fish, glistening in the sun. The cruel shark, tiger of the sea. Sailfish topping the crests of the waves. Iridescent dolphins in darting schools. Tarpons, tunafish, the giant jewfish. Altogether 576 varieties of fish have been found by scientists exploring these waters.

Vegetation on the little islands includes stunted mahogany, poisonwood with its alluring foliage, the wild rubber tree, nakedwood and other subtropical growths. Great cranes and herons flit from one island to another. Pelicans also inhabit the Keys, together with seagulls and frigate birds.

It was a paradise which Henry Flagler picked out for the right-of-way of the Florida East Coast Railway. Beautiful—but treacherous!

His plans called for laying 91 miles of rail on the tip of the mainland and across the various Keys, and 37 miles oversea, including 20 miles on embankments and rock fills and 17 miles on bridges.

The pioneers who toiled to build that F. E. C. extension created what was known as "the eighth wonder of the

ourtesy of Florida East Coast Ry.

(Upper) Picturesque View of Knights Key Bridge, Six and Three-Quarters Miles Long.
(Lower) The "Havana Special," Pride of the Flagler System, on Long Key Viaduct

world." With no precedents to follow, they fought a torrid sun and wild hurricanes, while carrying materials and equipment under almost insuperable handicaps.

The work involved assembling, transporting and distributing many thousands of tons of structural steel and reinforced steel. Also 461,000 cubic yards of concrete, thousands of

pine and Jucare piles, and filling material for the concrete arches.

HURRICANES swept away miles of embankment which had been built laboriously across the shoals. Huge rocks were carried away like chips of wood. And the engineering plans, which originally called for only six miles of open water spanned by bridges, had to be changed to allow 18 miles of bridge work and viaducts.

The storm of October 18, 1906, found the greater part of the men and equipment unprepared. Hundreds of men were working on the job. Out in the channels between the Keys was millions of dollars' worth of property, most of it at the end of hawsers. Storm signals were sent out the day before the big blow; extra anchors were given to everything afloat. There wasn't an anchor for a hundred miles around that wasn't doing duty that day.

An old lighter was wallowing in the high seas with sections of eighteen-inch pipe that were intended for use on the suction dredges. A veering wind blew these immense pipes overboard.

Then came a dead calm for a little while, followed by a terrific howling gale. The huge pile driver was the first to go. With her whistle wailing, she headed out to sea! She was never seen again. The crew also was lost.

She was followed by houseboats on which laborers were quartered, and other craft, small and large, tugging desperately at their moorings in a vain effort to prevent being swept out to destruction. The names of at least 75 railroad builders were written in the Book of Doom that day; some estimates double that number. For a month afterward, wreckage was washed ashore on the mainland and on coral beaches of treacherous Keys.

In 1909 another hurricane cut a wide swath of desolation. This time Flagler's men were not unprepared. The wind reached a velocity of 125 miles an hour. Miles of embankment and five huge girders were ruined, but no damage was done to concrete work.

Undaunted, the builders pushed on. Eventually six steel bridges were erected, also four drawbridges and 29 concrete viaducts. The water at the bridge sites varies from three to 38 feet in depth, the greatest depth being at Bahia Honda.

The most beautiful structure in the Extension is Long Key Viaduct, now pictured on the trademark. It is two and three-quarter miles long, consisting of 180 semicircular arches of fifty-foot span, with the tracks laid 30 feet above high tide. It was one of the first large bridges built of concrete.

Knights Key Bridge is the longest structure in the extension, stretching almost seven miles across the open sea! From one end of it the distant shore is scarcely visible, even on a clear day.

On January 22, 1912, the extension was sufficiently completed to be open for traffic. The first train to make the journey across that engineering marvel carried the private car of Henry M. Flagler, then 82 years old. It was a day of triumph for the venerable genius who had lived to see his greatest enterprise completed.

"Now I can die happy," he said.

A few months later Mr. Flagler answered the last call at his home in Palm Beach, on the main line of the iron road he had loved so well. But his life work will never die. Every train that roars down the Atlantic seaboard from New York to Florida, and on to Key West, is a reminder of the iron-willed man who had said, "The main line will go out to sea."

From Collection of F. D. Reese, 4 Charles St., Cortland, N. Y.

Civil War Scene from an Old Railroad Movie, "The General," Showing a Western & Atlantic Engine

On the Spot

SOME of the incidents in my story, "Civil War," might appear startling to the reader who, unlike myself, didn't happen to be born and reared in the South. For instance, it might be said that Boone Hatfield's meeting his friend Raleigh in the course of the raid was somewhat far fetched. Plenty of precedent, however. My own family was one of the many split asunder by the Civil War. One of my uncles, Col. Philip Blazer of the Union army, saw his brother, Capt. Dick Blazer of the Confederacy, at the Battle of Shiloh. My father was a Union officer. He spoke often of such unusual happenings.

Boone Hatfield's "railroad on stilts" also has ample precedent. Much of the South Carolina Railroad was first laid on piles. Great expense occurred when the wood began to rot and had to be replaced with proper roadbed, culverts, trestles, etc. Moreover, the Erie Railroad actually drove a hundred miles of piles, at the cost of a million dollars, *and never laid a rail on them!* The stretch of "roadbed" was known as "Lord's Folly," from President Lord, whose scheme it was. In some places piles the size of telegraph poles were used and were driven, one upon another, to the depth of 160 feet.

Railroads played a much greater part in the Civil War than is generally understood. Ingenious schemes were utilized for their destruction or protection. General Starr defended stations, yards, shops, etc., from Forest's raiders by a system of blockhouses provided with artillery. General Grant was much impressed by the idea and the results obtained. The "stealing" of a locomotive by Major Andrews and his men, with the view of destroying the bridges and trestles of an entire line, was one of the most thrilling episodes of the war.

The military operations in my story closely follow the facts of history: Sherman's march through South Carolina, his destruction of the South Carolina Railroad, the burning of Columbia, the burning and looting of Richmond, etc.

Lastly, my mother was a daughter of the South. One grandfather fought with Grant, the other with Lee. All of which makes my sympathies pretty well divided.—A. LESLIE, 452 W. 20th St., New York City.

* * *

E. S. Dellinger's Stories

Allow me to answer G. M. Anderson (Oct. issue) who criticized E. S. Dellinger's stories. Dellinger, in his "Creeping Shadows" yarns, depicted actual conditions and facts as they existed over 50 years ago. They date back to the Bald Knobber gang brought out by Harold Bell Wright in his "Shepherd of the Hills." Those who say Dellinger's work is impossible should read the daily newspapers. Even today many notorious criminals, when close pressed, head for the Ozark country because of its inaccessibility.

I railroaded in the Ozarks at the same time Dellinger did, and I know he understands what he is writing about. Dellinger himself is a product of that country, having first seen the light of day southeast of Springfield, Mo., in the heart of the Ozarks.—DANA MAVITY, 2504 13th Ave., Moline, Ill.

* * *

Your 6 popular departments and E. S. Dellinger are worth the price of the magazine, but there is no reason why you can't give us more real fiction.—E. S. MURPHY, Framingham Center, Mass.

* * *

Dellinger's "Hoodoo Special" (Sept. issue) carries me back to '83, when I was agent and coal station man on the New Haven Road at Sandy Hook, Conn. Trains often pinched out a pin in easing down a hill outside Sandy Hook. One train broke coming down the hill, and the head end had to back over a railroad bridge which spanned the Hoosatonic River, to get the tail end. They hooked on and proceeded to Fishkill on the Hudson where, upon checking up, they found a car missing. It was a mystery until August of the next year, when the river was low. They found that the car had jumped off the bridge without a trace and had been submerged until the water receded enough to expose the top of the car!—DR. CLARENCE G. PENNEY, Route 18, Litchfield, Me.

* * *

Train Order Problems

Answering R. A. Snyder's train order problem (Oct. issue): Although I have not railroaded for about 15 years, I manipulated trains as "detainer" on various roads for 20 years and have not forgotten that a train order is in effect until fulfilled, superseded or annulled. Also that to supersede a train order the words "instead of" must be added. Hence the train receiving the order reading "Order No. 2 is annulled" would proceed without a consideration of the former meeting point with Extra 235.

Hi, there, Tom Kane! Have you forgotten our association at Amarillo? I will be glad to hear from you and other old-timers.—D. C. LEACH, North Vernon, Ind.

* * *

Referring to Mr. Snyder's problem: Orders Nos. 1 and 2 are O. K., but Order No. 3 is a murder. It makes a main line meet somewhere at 30 to 40 m. p. h. Extra 122 East has a perfect right to proceed. However, if I were conductor or engineer on extra 122, I would ask the dispatcher what became of Extra 235 West. I would then proceed, keeping clear of regular trains. Order No. 2 only supersedes the meet at A between the two extras. The running part in

order No. 1 is in effect until Extra 122 East arrives at C. No doubt Extra 235 West had running orders to A. Some dispatching!

Here is one which I know that was issued by a dispatcher:

Order No. 1
C&E Eng. 105 at A
C&E No. 4 at K
Eng. 105 run extra A to M. Meet No. 4 Engine 165 at B.

"B" is a blind siding. No communication with the dispatcher. No. 4 comes along with green signals and also an order for Extra 105 East reading: "Extra 105 East has right over Second No. 4 B to K." What would you do as conductor or engineer on Extra 105 East?—Thos. W. Kane, ex-president, Ry. Train Dispatchers' Asso. of America, 1426½ S. Los Angeles St., Los Angeles.

* * *

Information Wanted

Last April 12th a B. & M. freight train left Brightwood, Mass., with 70 cars, mostly loaded, pulled by engine No. 3621, a 4-6-2 type. It was a rainy night and rails were slippery. Can anyone beat that with a small Pacific type?—D. T. Hayward, 2699 Columbus Ave., Springfield, Mass.

* * *

Does any reader recall the night the Denver and Salt Lake attempted to operate a steel sleeping car over Corona Pass (4½ per cent grade)?—R. A. Williams, Jr., 2509 Van Brunt Blvd., Kansas City, Mo.

* * *

I want to get in touch with some Southern Ry. op or station agent, Piedmont Division, in or near Greenville, S. C.—F. Watts, 1716 Park Ave., Shreveport, La.

* * *

For 5 years I have been investigating the history of the Essex Co. and the Lawrence Machine Shop (Lawrence, Mass., 1846-1859), where locomotives were made. The Essex Co. built 2 engines for the Erie, Nos. 142 and 143; I am anxious to get photos of them in connection with the historical material I am assembling. Can any reader help me?—Thos. Norrell, Box 750, Providence, R. I.

* * *

It would mean a lot to me to get a letter from a hogger. Just one letter! I would not expect him to correspond with me. However, I would like to correspond with railroad fans around my own age, 13.—Wm. Russell, 404 N. Broom St., Wilmington, Del.

* * *

Would like to hear from a locomotive fireman or engineer.—Walter Herschel, 775 Savin Ave., West Haven, Conn.

* * *

I want facts, pictures, etc., on the old Marshall & East Texas Ry., especially photos of its motive power, Nos. 56 to 63. My brother Carl (killed in the World War) was a fireman on this road until its abandonment in 1916, and loved those locos very much.—Roy B. Azbell, motorman, 639 E. 55th St., Los Angeles.

* * *

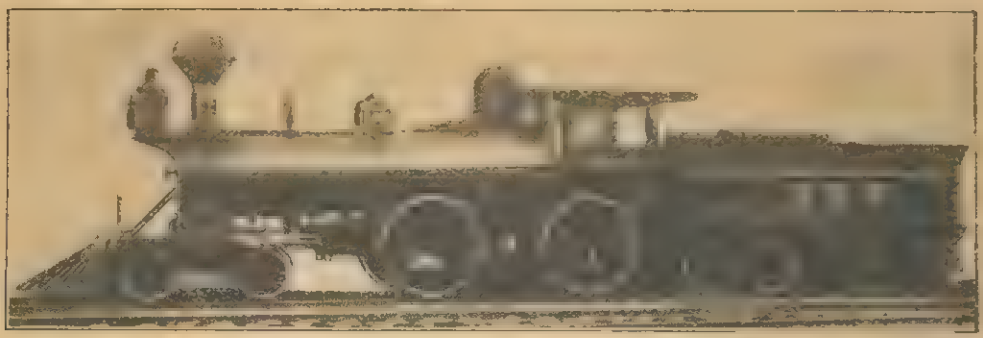
Six miles north of Alden, N. Y., is a railroad grade running east toward Batavia, N. Y. To my knowledge, this grade has never been used as a railroad. The cuts, fills, culverts, etc., were there when I was a boy some 50 years ago. It was called locally the "Old Conhocton." Who can furnish information on it? Also, I would like to know if anyone has a photo of the old "pony" engine used by Supt. Burroughs of the N. Y. Central Buffalo Division as an inspection car about 50 years ago.

It is hard for me to get copies of your magazine in this part of the country, so I am sending $1.50 for one year's subscription.—E. L. Bennett, Coleman, Mich.

* * *

From the *National Car Builder*, Dec., 1881, I quote: "New style cars are about to be introduced on the Southern Pacific, designed to be run from California to the Gulf as wheat cars and on their return as emigrant cars. The interior will be like other freight cars. Along the sides will be sleeping bunks, lowered and suspended by an iron rod and hinge, but capable of being closed up flush when freight is carried. There are windows, of course; and it is said the cars will be as comfortable and warm as the most luxurious

Northern Pacific Double-Header Snowbound in Dakota Territory Fifty Years Ago



From Collection of C. D. Wright

An Old-Timer on the Lake Shore & Michigan Southern, No. 195, the "P. P. Wright"

Pullman." I wonder if they were?—W. DWIGHT, 1 Webster St., Quincy, Mass.

* * *

Would like to get a letter from a Pullman conductor.—S. R. CECIL, JR. (age 19), Battle Ground Academy, Franklin, Tenn.

* * *

On the Erie between Tuxedo and Paterson, N. J., is a long line of bents as if for a railway trestle, between two high mountains about a mile and a half or two miles apart. The bents cross the Erie roadbed about a half mile from a town, but I cannot remember the name of it. Can anyone supply information?—J. BROWN, 1041 39th St., Brooklyn, N. Y.

* * *

I want to get acquainted with a fireman or engineer in my locality.—JACK MILLIGAN (age 15), 8309 Aberdeen St., Chicago.

* * *

The poem "Sand" (Oct. issue), signed "Anonymous," was written by J. L. Sedgley and first published in the *Northwestern Pacific Headlight*. —C. F. BERRY, 967 Elm St., Manchester, N. H.

* * *

Engine Named for His Father

Here is a photo of the Lake Shore & Michigan Southern (now N. Y. Central) locomotive No. 195, the "P. P. Wright." This engine—with 2 sister engines, the 181, "J. H. Wade," and the 293, "Charles M. Reed"—was built by the Schenectady Locomotive Works in 1886. She was named for my father, who was general superintendent of the road and a friend of Engineer John Gulmyer, "The Flying Dutchman" of your "Famous Engineers" series.

I have been told that these were the first engines built in U. S. with a boiler pressure of 180 lbs. They had a total weight of 94,000 lbs., with 64,000 lbs. on the drivers, 18 x 24 cylinders and 69-inch drivers, were free steamers and very fast.

Cy Warman in his book, "Tales of an Engineer," mentions riding on the 293. He says she "put a mile a minute behind her with a grace and ease that was really remarkable." H. L. ("Cupid") Childs, of Mandan, N. D., was probably the first man to ride eastward from Chicago to New York in a locomotive cab. However, Warman rode a cab westbound from New York to Chicago in 1893. He did it in 20 hours, which was also the running time of the "20th Century" when Cupid made his trip.—C. D. WRIGHT, 503 S. Lakeview Ave., Sturgis, Mich.

* * *

Pioneer Canadian Roads

"America's First Railroads" (Oct. issue) interested me very much. Earle Davis did a splendid job with that article. However, the statement that the Champlain & St. Lawrence R. R. was the first in Canada is now open to question. It was the first public railway, as we now understand the term, but 2 earlier lines should be mentioned.

In 1823 the Royal Engineers began to construct the fortifications of the City of Quebec. To haul stone and other material from the wharf up to the top of Cape Diamond, they built an inclined plane, operated by a stationary steam engine. Though not exactly a railway, it was the first known instance of a wheeled vehicle running on rails in Canada. This was in service from 1823 to about 1842. After the military authorities completed their work in 1832, the line was used by the general public.

The second pioneer road extended about a mile from the Albion coal mines at Stellarton, Nova Scotia, to the banks of the East River of Pictou. It was standard gage, built and opened in 1829. The road was powered by steam, with rails of the cast-iron, fish-belly type. It was extended until finally, in 1838, it ran to Abercrombie, about 6 miles from Stellarton. Locomotives were introduced in 1838; the first one, the "Samson," is preserved in the Canadian National Depot at Halifax, N. S. Though the line was intended solely for coal transportation, a small passenger coach was built in 1838 and limited passenger service was given. This coach is now owned by the Baltimore & Ohio.

Even aside from the Albion mines road, I am not at all sure that the C. & St. L. was the first standard gage railroad in North America. Were not the Mohawk & Hudson, the Saratoga & Schenectady and the Camden & Amboy railroads standard gage? A list of all the early lines with the gage of each would be very interesting.—R. R. BROWN, Secy., Canadian Railroad Historical Asso., 5359 Park Ave., Montreal, Canada.

The Wreck at Warrior Ridge

Answering a request for information on the P. R. R. wreck Feb. 15, 1912: "The Pennsylvania Ltd." No. 2, eastbound, was derailed at Warrior Ridge, Pa., 4 miles west of Huntingdon, at 11.52 A.M. There were about 100 passengers on the train, which consisted of 2 locomotives, a postal car, a combination smoking and baggage car, 2 dining cars, 3 sleeping cars, and a compartment observation coach. The derailing was caused by a broken lower arch bar on the right hand side of the second locomotive, No. 3350, while the train was making 50 miles an hour. All the cars left the track except the postal car next to the second engine. They fell down an embankment. Some lodged on the ice in what used to be a lock of the old Pennsylvania Canal. All the derailed cars were steel. Two passengers and 3 of the crew were killed, and a number were injured.—C. W. WITBECK, Box 1602, Shreveport, La.

* * *

Doubleheaders

Pay is the principal reason why a small engine is used on head end. Engineers get paid according to the type of engine they drive. In passenger service, an extra man always gets called for the helper engine, hence he gets the smaller rate of pay instead of the man who has regular bid in a run. Freight service crews are "chain-ganged." That is, the last man in goes on bottom of list, and the first man in is the first man out. The first man out on the list gets the head engine, which makes them break about even as to pay. Also, a bigger engine has a heavier drawbar, which is coupled next to the train as it gets most of the strain, the lighter engine being on front.

There are a few types of small engines that are placed second when double-heading, notably a passenger engine as helper on freight. The passenger engine would be placed second because it does not have as large air reservoirs as the heavy freight jacks, and the head engine always handles the brakes.—A. PARSONS, 6328 Cedar St., Huntington Park, Calif.

* * *

In the Maple Leaf Dominion

In your Sept. issue I was surprised to see an old friend of mine, A. N. Boyd, depicted under "Famous Engineers." I was a Maine Central engineer when Boyd started firing. Often he fired for me. A more friendly fireman I never met. I remember how we all used to gather around and listen to him talk. He had that quaint "Kaintuck" accent. In 1912 I worked beside Boyd when he was a Canadian Pacific engineer at Schreiber and Chapleau, Ont. Two days after receiving his last letter I was shocked to read of his untimely death. Since 1918 I have been with the Atlantic Coast Line.—C. H. HUTCHINSON, Box 182, Wilmington, N. C.

I have been reading your magazine since Dec., 1929, and it surely has dropped a rung or two since then. The fiction now contains too much crime, blood and thunder. Your front covers have gone in the hole, too. Remember Harry Temple's "31 Copy 3," and "Red Eye," and "Worthy Brother"? Those covers were true to life, not gaudy and vivid like some of the more recent ones. I'll wager any reader would like to see the magazine of '30 and '31 come back, even with the higher price. How about it, brothers?—JACK DERAGON, 125 B. Bourdages St., St. Hyacinth, Que.

* * *

Speed the day when you decide to cut down on fiction and give us more true tales and engine pictures!—J. R. WANLESS, 1120 Nelson St., Vancouver, B. C.

* * *

A year ago my name first appeared in the International Engine Picture Club. Since then, by judicious trading, I have piled up 600 or so nice snaps.—GEO. HARRIS, 140 Evanson St., Winnipeg.

* * *

80 Killed in Frank Slide

I noticed a request for additional facts on the slide at Frank, Alta. For 20 years I was carpenter and bridge-foreman on the Crow's Nest Division of the Canadian Pacific—from Dec., 1900, to June, 1920. My headquarters were at Cranbrook from 1900 to 1914 and at Sethbridge from 1914 to 1920. I know every foot of the lines south of the main line from Medicine Hat to Kootenay Landing.

I was at Fernie, about 40 miles west of the slide, when it happened. Although all available track and bridge crews were sent to help on the slide, I was not asked to go as I had no car. This work took 6 weeks, and not 3, as someone stated in your Sept. issue. Even the local superintendent took a back seat while the contractors pushed the rebuilding. The slide covered part of the town and east of it a space a mile and a half square. In some places the old line was covered by hundreds of feet of rock. The rocks varied from boulders as big as an average house to pebbles. While the rebuilding was going on, still more rock came down, making an awful noise. If I recall correctly, 80 people were killed, including the occupants of the houses, a survey crew and members of a construction camp who were building a line-up to a new mine. The line was a branch line of the French Co., but connected with the Canadian Pacific at Frank.

Although I worked on and around the slide later, I do not recall hearing of any of the bodies of those killed ever being exhumed. This was due to the sliding rock, which made it impossible to look for them. The only survivor of the catastrophe was a little girl, who was found crying on top of the slide. The girl has since reached

womanhood and is living in Canada. I think the mouth of the mine at Frank was covered, but as far as I know the men and horses were taken out.

The new line was built over the slide. Later on the mountain cracked open farther back and the government made all the people move west toward Blairmore in case it should come down again. To date there has been no serious movement.

The year before the slide the Coal Creek Mine blew up and killed about 170 persons. I remember it well, for at the time we were suffering from a big flood. The Fernie bridge was not passable and the roads were cut in many places with deep washouts. We were loading timber to repair bridges on cars, night and day, at the Coal Creek Mill. We had to push the lumber cars by hand as there were no trains running. We fixed things up and were very glad when the first train came in.

In 1907 I was at Fernie just after a big forest fire. I helped them rebuild the bridges and other structures. The Great Northern also lost a lot of property.—D. A. McRae, 225 N. Everett St., Glendale, Calif.

* * *

Wm. Tyrrell is correct in saying that the Frank slide did not bury a bank, for the main part of the village was undamaged; 7 or 8 houses were buried, also a barn in which the coal company kept its horses. Mr. Tyrrell said he was there from 1905 to 1910. I was there also, both before and after the slide. My father and I worked in a coal mine at Lille, 5 miles south of Frank. The coal company owned a short pike with 2 locomotives; it had 25 bridges and many curves. Jack Williams was engineer. Further details on the slide could be obtained from my old pal, Engineer A. E. Staysko, of Sethbridge.—Matthew Petras, 2885 Woodhill, Cleveland, O.

* * *

A Challenge to Lightning Slingers

Your Jan., 1933, issue mentions a Frisco operator, R. O. Willard, who has 20 years' seniority, has never bumped anyone nor has he been bumped, and has never been put on the extra board. I am an operator with 24 years' seniority on the Northwestern Pacific. Have never bumped anyone or been bumped; never been on the extra board. I believe there are many other operators who can truthfully say the same. How about it, lightning slingers?—L. E. Green, Healdsburg, Calif.

* * *

The Steam-Juice Argument

Sam Butler's letter (Oct. issue) under the "Steam-Juice Controversy" is so erroneous that I hasten to express my opinion of it.

(1) His criticism is based solely on theory. The figures for outstanding electrifications in mountain territory show that it has been well worth while. But until the P. R. R. electrification project is completed and traffic becomes more normal, such a statement as the one made by Mr. Butler is mere guesswork.

(2) The P. R. R. project, the world's largest electrification, although progressing slowly, has NOT stopped.

(3) Electrification engineers do not depend upon one power. Mr. Butler should study an electrification magazine. Incidentally, power plants seldom fail.

(4) If first cost is meant in the fourth section of Mr. Butler's criticism, the statement is correct. But when it comes to a comparison of speed and availability, the juicer has it all over the steam hog. Except for routine overhauling and the relatively short inspections, the juice jack is available 24 hours per day.

(5) The electrics use continuous cab signals, thus rendering wayside signals more or less unnecessary. Therefore visibility is a minor factor.

There can be no doubt that the steam jack as we know it today will soon be a thing of the past if the present trend toward stream-lined articulated trains—whether gasoline, electric or steam driven—continues. This, of course, applies only to passenger trains.—W. E. Bostwick, 437 W. School Lane, Philadelphia, Pa.

* * *

Personally, I favor steam, but why clutter up the magazine with letters arguing about it? The roads will do as they please anyway, and you could use the space to much better advantage by printing more letters from boomers and old-timers.—Gordon Kepner, Box 264, Dighton, Kans.

* * *

Paul R. Morgan's letter (Oct. issue) said: "The idea of utilizing internal combustion engines was introduced by the Santa Fe in 1915." I believe Mr. Morgan is in error, as I have a photo taken at Shepherd, Mich., by P. J. Chamberlain, who was operator there at the time. This motor car was the first of 5 bought by the Ann Arbor Railroad in 1911. They were used in regular passenger service until Jan. 1, 1925.

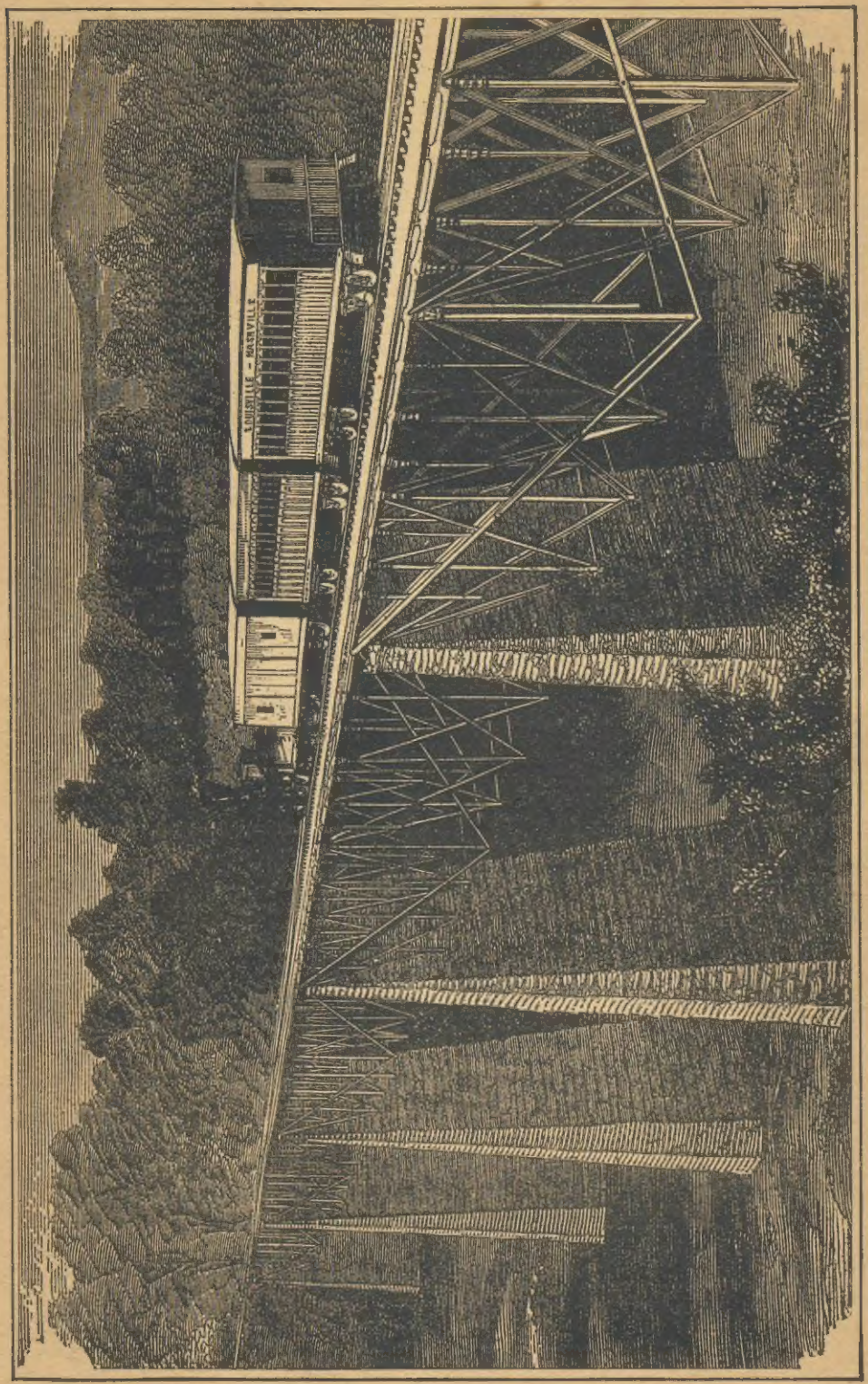
These motor cars were powered by a gasoline engine when first delivered, but later changed to kerosene. They were very speedy and often ran 60 m. p. h. In fact, they were so speedy that the railroad cut them down to a maximum speed of about 50 m. p. h. The crew consisted of a motorman, a conductor, and a brakeman-baggageman.—Roy Harter, Ithaca, Mich.

* * *

An Interesting Old Bridge

Back in 1860, when it was new, the Louisville & Nashville Railroad bridge over the Green River near Mumfordsville, Ken., was the largest iron bridge on this continent, with the single exception of the Victoria Bridge at Montreal, Canada. It was located 20 miles from the celebrated Mammoth Cave, which is also on the Green River.

Total length of the L. & N. bridge was 1,000 feet, consisting of three spans of 208 feet and two of 288 feet each; was 118 feet above low-



Bridge over Green River, on the Louisville & Nashville Railroad, as It Looked at the Time of the Civil War

water; contained 638,000 pounds of cast and 381,000 pounds of wrought iron, and 2,500 cubic feet of timber in the form of rail-joists. There were 10,220 cubic yards of masonry in the piers and abutments. Cost of the superstructure, including that of erection, was $68 per foot lineal —that of the entire work, $165,000.

The bridge was designed by Albert Fink, the designer and constructor of bridges and viaducts on the Baltimore & Ohio Railroad. It was begun in April, 1857, and completed in March, 1859. The ironwork was built by Inman & Gault, of Louisville. The first train ran over this bridge July 1, 1859.—C. E. T., New York City.

* * *

The Engine Picture Hobby

Since my name appeared in the International Engine Picture Club I have been swamped with mail. Have made many engine picture friends by correspondence and have met several local collectors—all through RAILROAD STORIES magazine! H. I. HUMPHREY, 22 Theron St., Johnson City, N. Y.

* * *

A fan suggested getting together all the engine picture fans who live in the same town. Here is my idea: Choose from each city one person. Publish his name and address. The fans nearby can then write to him and he can send a list of their names to each one writing to him.—E. BARLOW, 52 E. Highland, Sierra Madre, Calif.

* * *

You've printed a lot about getting photos of small roads. Why not timetables, too? Look at the abandonment list every month. I'll wager few collectors have timetables of defunct roads. Perhaps these could be gotten from some of the "gang" living nearby.—JOHN PEARSON, 158 Harding Pl., Syracuse, N. Y.

* * *

Print more railroad songs. Many of us buy RAILROAD STORIES for the words of old favorite songs.—A. R. BILODIAN, Co. A., Fort McKinley, Portland, Me.

* * *

Famous Engine Dismantled

This newspaper dispatch from London will interest railroad fans:

"A battle-scarred British war veteran and ex-German prisoner of war, with a travel record of more than 1,220,000 miles, has passed away. This hero was a locomotive No. 2717, believed to have been the only British railway engine to have been captured by the Germans. It has just been withdrawn from service and broken up.

"While in use on the British front at Cambrai in 1917, No. 2717 was captured by the enemy and for five months was used as a machine-gun post in 'No Man's Land.' Following the March retreat the Germans removed the engine, patched up the bullet and shrapnel holes and used her for railway service until she was recaptured by the British in 1918. On return to home duties after the war the engine was decorated with a plate recording its war service."—G. WILBUR, 39 12th St., New London, Conn.

Iron in the Blood

I am an ex-rail. Your magazine is about the only thing that keeps me from going nutty because I can't smell oil smoke once in a while. Three years ago I lost a leg under the wheels of a locomotive, which ended my railroad career. I was working for the Southern Pacific; I want to say that the S. P. takes mighty good care of its injured employees. I got wonderful attention at the company hospital in San Francisco, and the claims agent with whom I made settlement gave me as square a deal as any man could want. So I'm sticking up for the S. P. as long as I live.—DONALD TRYER, 132 Tripp St., Medford, Ore.

* * *

Why are so many of your yarns about rusty pikes out West, when the best railroading is right here in the East? For example—one Sunday, while standing in Union Station at Troy, N. Y., I saw a 19-car train pull in on the Delaware & Hudson, unhook the D. & H., bang a N. Y. C. Hudson type into them, and sneak away with the train, all done so simply that I hardly noticed it.

When my grandfather retired on the B. & M., he was the oldest man on the Eastern Division. My father also pulled the big stick on the right-hand side, and I have been on 29 different roads in the East.—C. R. NORWOOD, 114 E. 31st St., Brooklyn, N. Y.

* * *

The Ballybunion Monorail

In "The Ballybunion Monorail" (Sept. issue) Emmett Barry said this curious pike ran northward from Ballybunion to Belmore, 1½ miles away. There is no place named Belmore in the vicinity. It actually ran inland in a southeasterly direction to Listowel, and was called the Listowel & Ballybunion. It was 10¾ miles long, running alongside the county highway most of the way. Road, power, and rolling stock were French built. The line was opened in 1886. It was never a financial success, and was finally abandoned Sept. 13, 1924, due to motorbus competition.

Barry made several mistakes in that one short article. The Great Northern was never Erin's biggest road; it was always in second place to the Great Southern & Western, which owned 973 miles of route at the time its existence ended in 1924. Ireland's biggest system is now the Great Southern, 2,191 miles of route, which is a consolidation of almost every railway line in the Irish Free State, dating from Jan. 1, 1925.

The author gave the names of 5 Irish companies, and got 3 of them wrong. Instead of "Belfast & Northern" he should have put Belfast & Northern Counties. (Besides, it dropped "Belfast" out of its title in 1903 when bought up by

the Midland Ry. of England.) The name "Dublin & Wexford" should have been Dublin, Wicklow & Wexford, which title applied before 1907. It was finally called the Dublin & South Eastern until consolidated in the Great Southern system in 1925. What Barry called the "Great Western" was really the Great Southern & Western.—F. K., Wavertree, England.

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E. & W. C. Abandoned

When the final train pulled in on the East & West Coast Railroad last Aug. 14, service on the line was abandoned. Since about 1920 the road had been operated under lease by the Seaboard Air Line. For the past year the net loss for operation is said to have been $6,000, due to motor vehicle competition.

The road was built originally to cross the State of Florida between Bradenton and Fort Pierce, through Arcadia, but only the part from Bradenton to Arcadia was built. For several years it was a profitable concern, its cargo being chiefly logs, but the woods have all been cut over, good roads have taken the passenger traffic, and there wasn't anything for the railroad to haul.

The last crew to make the trip consisted of Conductor Boyd, Engineer Acosti, Fireman Rutherford and Brakeman Mathurs.—A. E. Pooser, Arcadia, Fla.

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Foreign Lands Heard From

The Sierra Leone Ry. runs from Freetown on the coast 228 miles eastward to Pendembu, within a few miles of Liberia. A branch line runs northward from Bauya—about 60 miles from Freetown—to Makeni, 83 miles from Bauya.

Including sidings, we have a total of 327 miles of track, 2½-foot gage, using rails weighing 30 lbs. per yard. We have 39 locomotives, of which 7 are Garratt (wheel arrangement 2-6-2-2-6-2) capable of hauling a load of 230 tons. This load is considerably below the capacity of the engine, but as the ruling grade of the railway is 1 in 50 the maximum load which a Garratt engine may haul throughout the line is, of course, subject to this limitation. Our rolling stock consists of 430 cars, of which 82 are passenger and the balance goods stock.

The traffic conveyed during 1932 totaled 65,115 tons, chiefly palm kernels for export, of which 52,000 tons were conveyed during 1932.

This railway, which is owned and operated by the Government of the Colony, is also responsible for the telephone and telegraph system of the Colony and for the running of a motor bus service in Freetown, the capital.

This is not a "boomer" road; none of our employees hail from U. S. or Canada. I am not an engine picture collector, nor do I know any one in this section of Africa who is actively interested in that hobby.—J. E. M. Beasley, Acting General Manager, Sierra Leone Ry., Freetown, Sierra Leone, Africa.

I am employed in the New Zealand Government Railway shops at Woburn. Would enjoy corresponding along mechanical lines with a young man or woman, to whom I would send copies of our monthly railway magazine. At present we are engaged in building new Class K locomotives, as well as our usual repairs.—A. G. Pickering, Grey St., Woodville, New Zealand.

* * *

The Central Ry. of Peru is the world's highest standard gage line, reaching an elevation of 15,806 feet in 108 miles of travel, with 61 bridges, 66 tunnels and 21 switchbacks. We have 105 passenger coaches, 777 freight cars, and 57 locomotives, as follows:

Four 0-4-0 switchers made by Beyer & Peacock & Co. Ltd., 1909-1913.
Three 0-6-0 switchers, W. C. Bagnall Ltd., 1929.
Three 4-6-0 passenger, Alco, 1907.
Six 2-6-2 passenger, North British Locomotive Co., 1909.
Eleven 2-8-0 pass.-frt., Rogers, 1907.
Ten 2-8-0 frt., N. Brit. Loco., 1908.
Five 2-8-2 pass.-frt., Alco, 1913.
Five 4-8-2 pass.-frt., Yorkshire Engine Co., 1924.
Four 2-8-2 plus 2-8-2 (Beyer Garratt) frt., Beyer & Peacock & Co. Ltd., 1930.—T. Jefferson, Locomotive Supt., Central Ry. of Peru, Callao, Peru.

* * *

I have been following with interest and amusement the letters of readers concerning the merits and demerits of American and European locomotives. I have knocked around a bit myself, having handled hogs of American, British, German and French makes. I have also seen how they run trains in Africa and Asia as well as Europe, and I believe there is just one way to look at it: Every hog is designed and built to do a particular class of work, whether it's an Alco or Ansaldo, Baldwin or Beyer & Peacock, Hanomag, Skoda, Schneider or Krupp. Whether it is built in America, Australia, Africa, Asia or Europe matters little, as long as it does that work easily, economically and can be relied upon to give regular service.

Through Railroad Stories I have got in touch with other members of the International Engine Picture Club, greatly increasing my collection as a result.—George A. Coppering, Broomhouse Bungalow, Wangford, Brandon, Suffolk, England.

* * *

As I used to live near Manchester, England, I'd like to answer critics of British railroading.

True, the British rolling stock is not nearly so heavy as that used on North American roads, nor are the locomotives of "the right little, tight little island" so large and powerful as those on this side of the Atlantic; nevertheless, pound for pound in weight, they will hold their own with locomotives of other lands. Anyway, the British do understand how to take care of their engines. They come nearer to getting their money's worth out of them, so far as long continued, efficient service is concerned, than do the Americans.—Fritz Gannon, San Jose, Calif.

America's First Big Train Robbery—Earle Davis

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